

3

)

Appendix C

)

Environmental Resource Maps

)

)

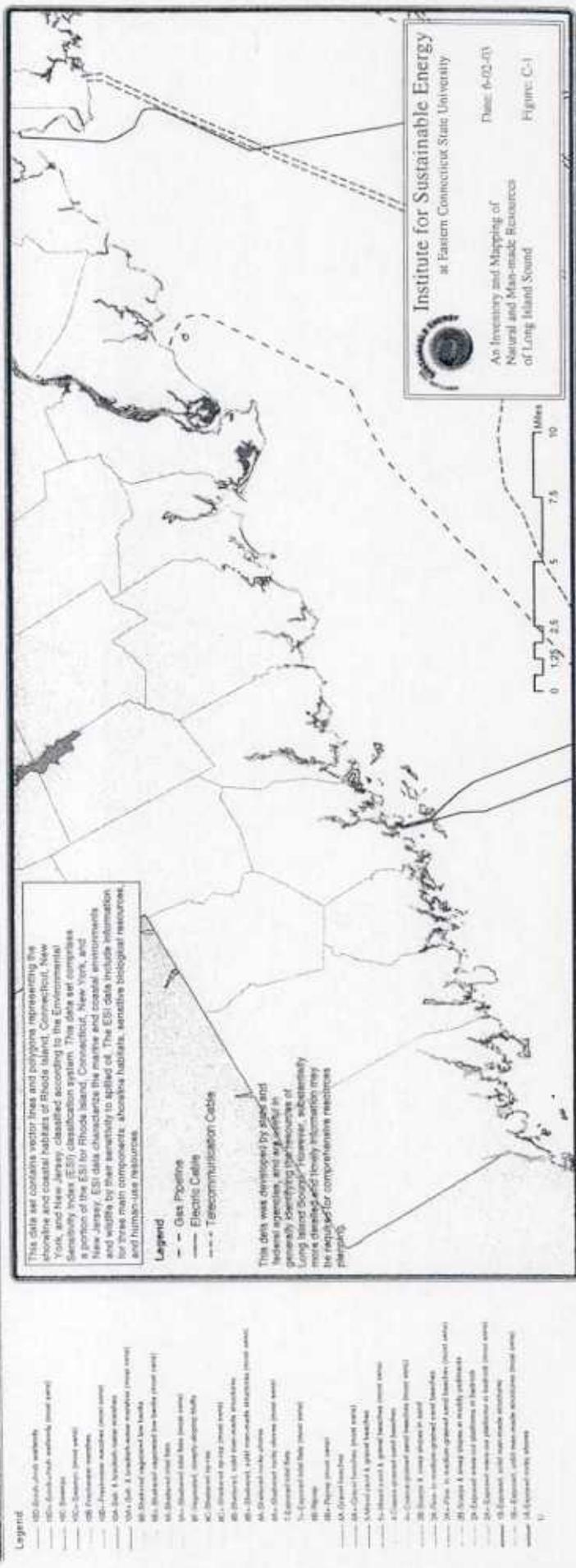
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Environmental Resource Maps

These data were developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.

Note: Approximately 1,800 feet of the Cross-Sound Cable has not been installed to depths required by permits.

Existing & Proposed Infrastructure Crossings of Long Island Sound Coastal Environment- Shoreline Types



Institute for Sustainable Energy
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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03
Figure: C-1

This data set contains vector lines and polygons representing the shoreline and coastal habitats of Rhode Island, Connecticut, New York, and New Jersey classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI for Rhode Island, Connecticut, New York, and New Jersey. ESI data characterizes the marine and coastal environments and water by their sensitivity to spillage. The ESI data includes information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

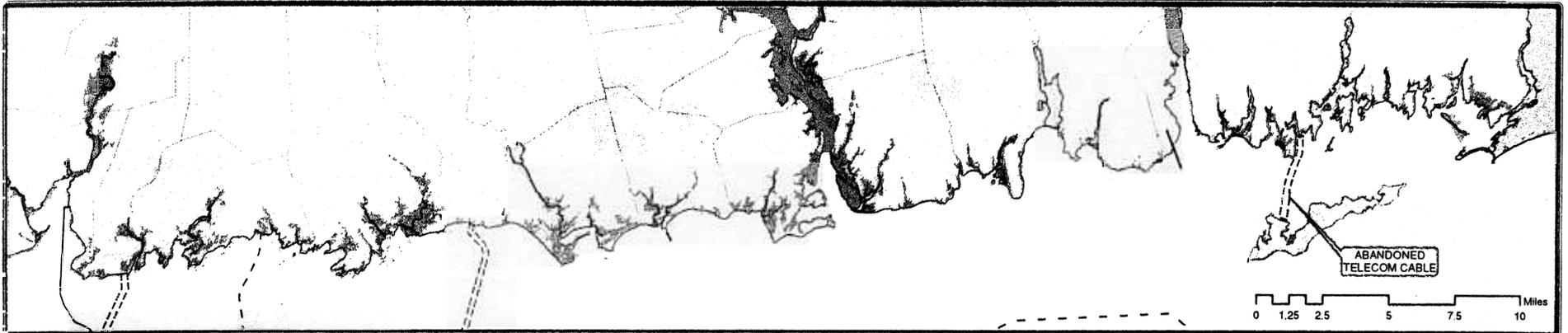
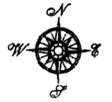
Legend

- Gas Pipeline
- Electric Cables
- Telecommunication Cables

This data was developed by state and federal agencies, and is available in general. Identifying the resources of Long Island Sound, however, substantially more detailed and timely information may be required for comprehensive resource planning.

- Legend**
- 000 Shrub/Arb. wetlands
 - 001 Shrub/Arb. wetlands (near water)
 - 002 Swamp
 - 003 Estuary (near water)
 - 004 Freshwater wetlands
 - 005 Freshwater wetlands (near water)
 - 006 Salt & brackish water wetlands
 - 007 Salt & brackish water wetlands (near water)
 - 008 Shrub/Arb. wetlands (near water)
 - 009 Shrub/Arb. wetlands (near water)
 - 010 Shrub/Arb. wetlands (near water)
 - 011 Shrub/Arb. wetlands (near water)
 - 012 Shrub/Arb. wetlands (near water)
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 - 097 Shrub/Arb. wetlands (near water)
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 - 099 Shrub/Arb. wetlands (near water)
 - 100 Shrub/Arb. wetlands (near water)

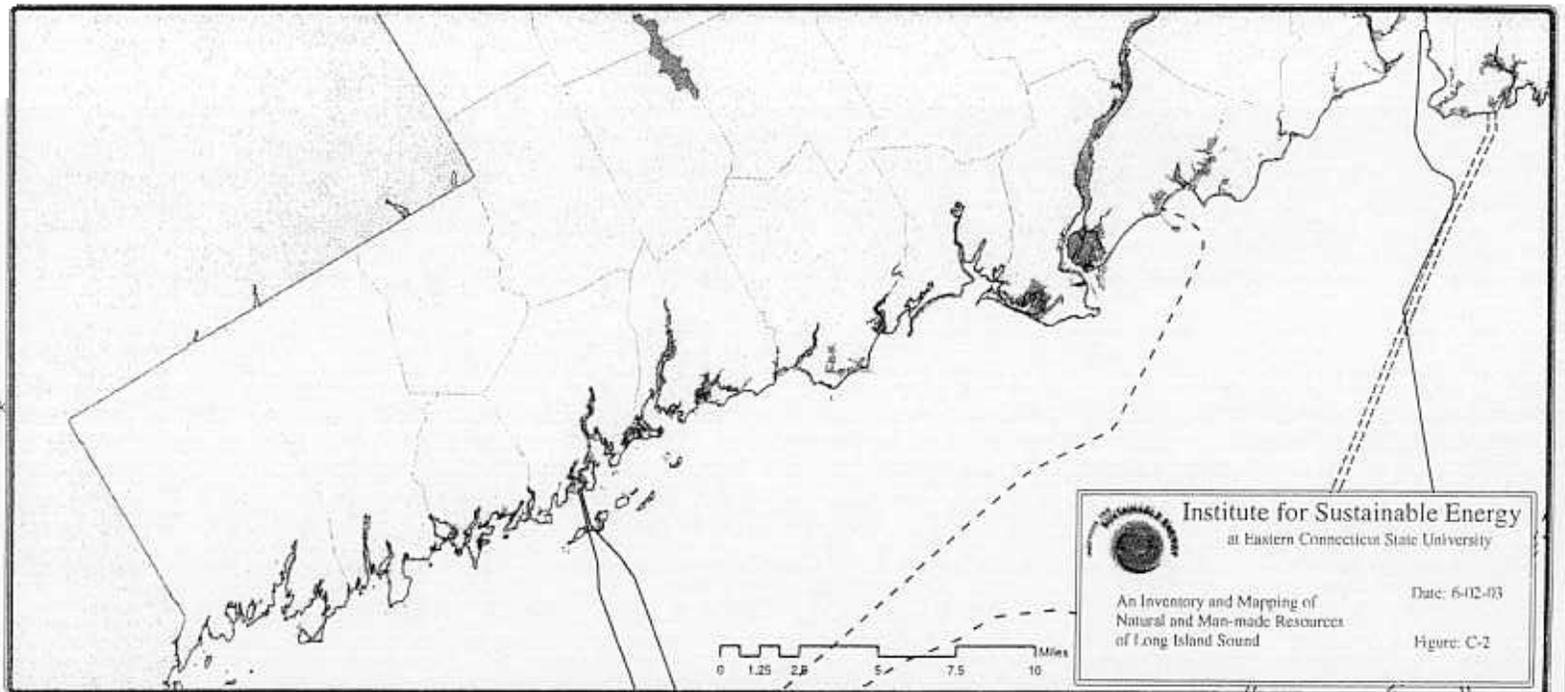
Existing & Proposed Infrastructure Crossings of Long Island Sound Coastal Environment- Coastal Wetlands



Legend

- - Gas Pipeline
- Electric Cable
- - - Telecommunication Cable
- 10D-Scrub-shrub wetlands
- 10C-Swamps
- 10B-Freshwater marshes
- 10A-Salt- & brackish-water marshes
- 9A-Sheltered tidal flats
- 7-Exposed tidal flats
- 4-Coarse-grained sand beaches
- 2A-Exposed wave-cut platforms in bedrock

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.



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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03
Figure: C-2

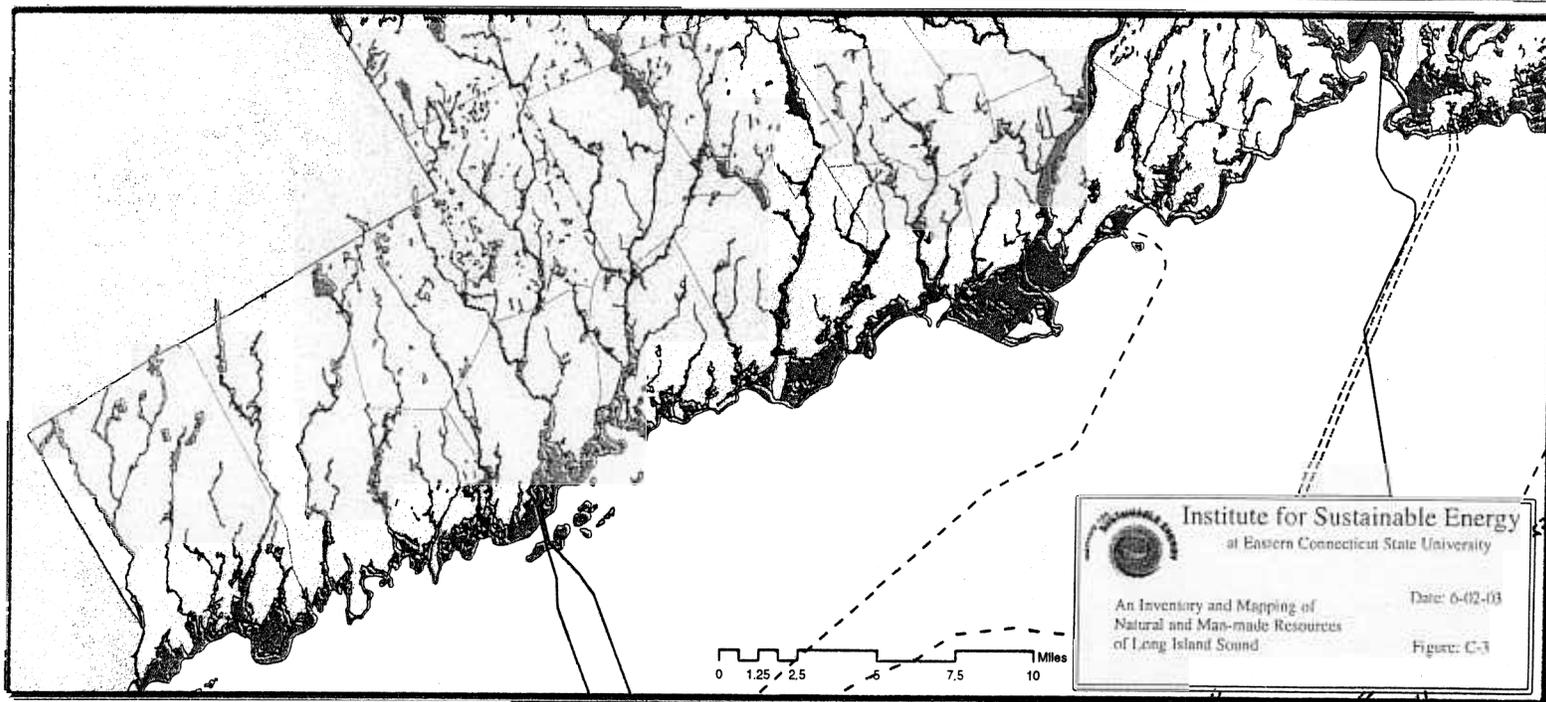
Existing & Proposed Infrastructure Crossings of Long Island Sound Coastal Environment- General Flooding Classifications



Legend

- Gas Pipeline
 - Electric Cable
 - Telecommunication Cable
- 100 Year Flood Zone
 - 500 Year Flood Zone
 - Floodway in Zone AE
 - Other Flood Areas

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.



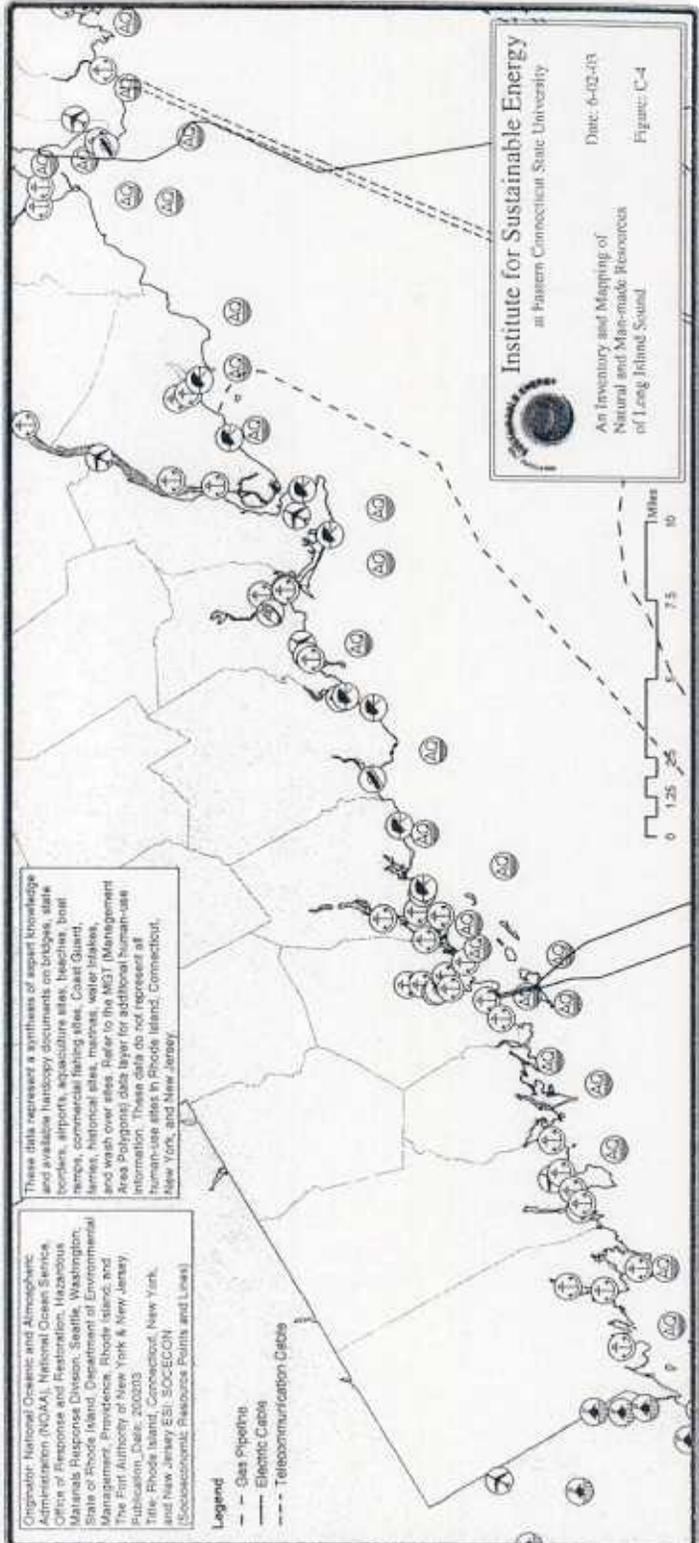
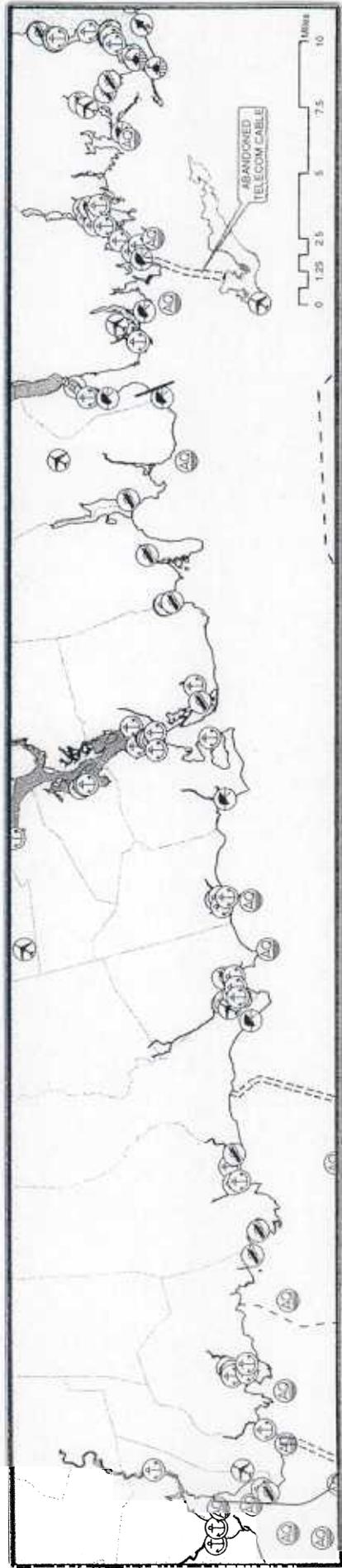


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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03
Figure: C-3

Existing & Proposed Infrastructure Crossings of Long Island Sound Built Environment- Socioeconomic Resource Points



These data represent a synthesis of expert knowledge and available history documents on bridges, state borders, airports, aquaculture sites, beaches, boat ramps, commercial fishing sites, Coast Guard, lighthouses, historical sites, marinas, water intakes, and wash over sites. Refer to the WEST (Management Area Subgroup) data layer for additional human-use information. These data do not represent all resource areas in Rhode Island, Connecticut, New York, and New Jersey.

Geographic: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, State of Rhode Island, Division of Environmental Management, Office of Planning and Policy, and The Port Authority of New York & New Jersey, Publication Date: 200303
Title: Rhode Island, Connecticut, New York, and New Jersey ESI, SOC-ECON (Socioeconomic Resource Points and Lines)

Legend
 --- Gas Pipelines
 --- Electric Cables
 --- Telecommunication Cables

Legend

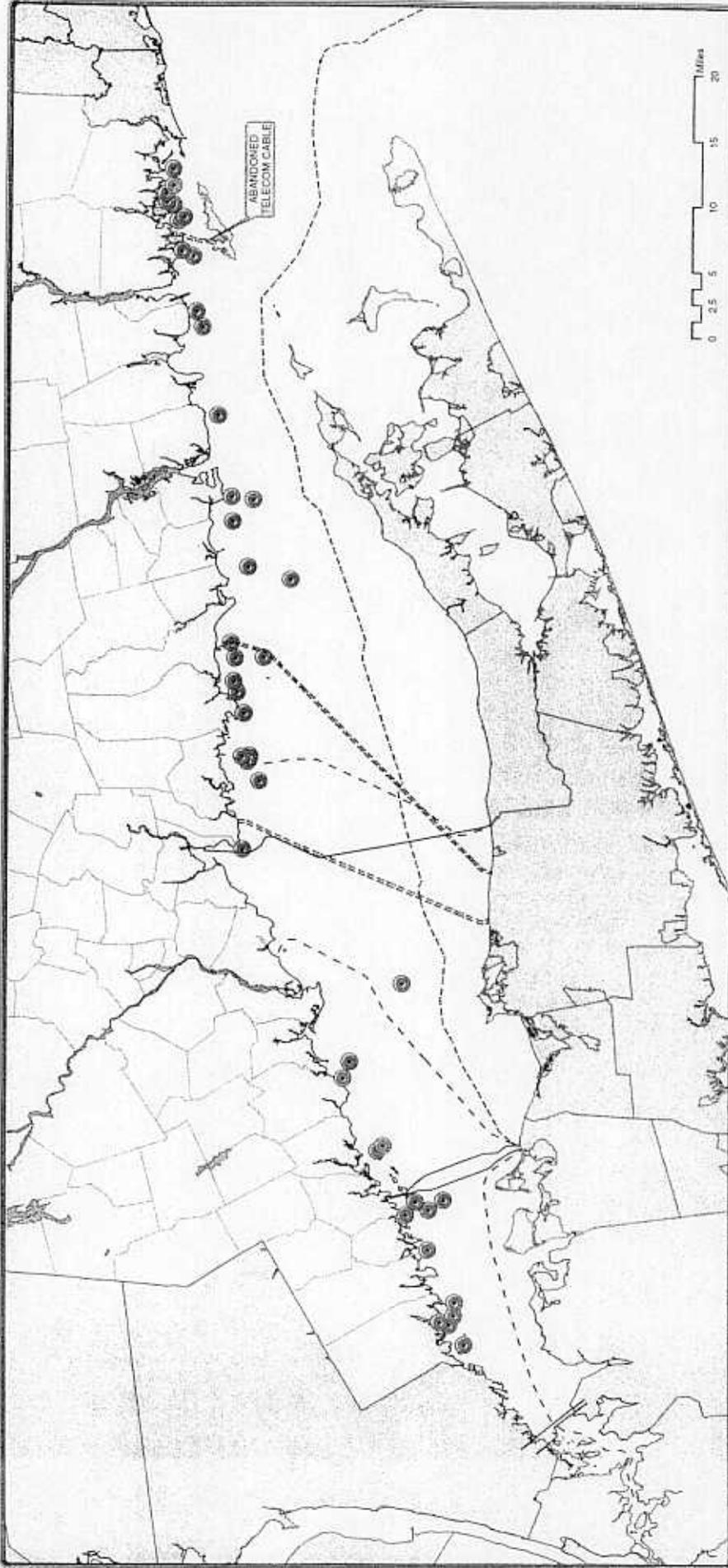
- AIRPORT
- AQUACULTURE
- BEACH
- BOAT RAMP
- COAST GUARD
- COMMERCIAL FISHING
- FERRY
- HISTORICAL SITE
- MARINA
- WASH OVER
- WATER INTAKE

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantial more detailed and timely information may be required for comprehensive resource planning.

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 at Eastern Connecticut State University

Date: 6-02-13
 Figure: C-4

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Natural Reef Areas



Legend

- TYPE**
- ⊙ Reef - Rocky hard bottom in shallow water
 - ⊙ Reef - Sandy soft bottom in shallow water

Legend

- - Gas Pipeline
- - - Electric Cable
- - - Telecommunication Cable

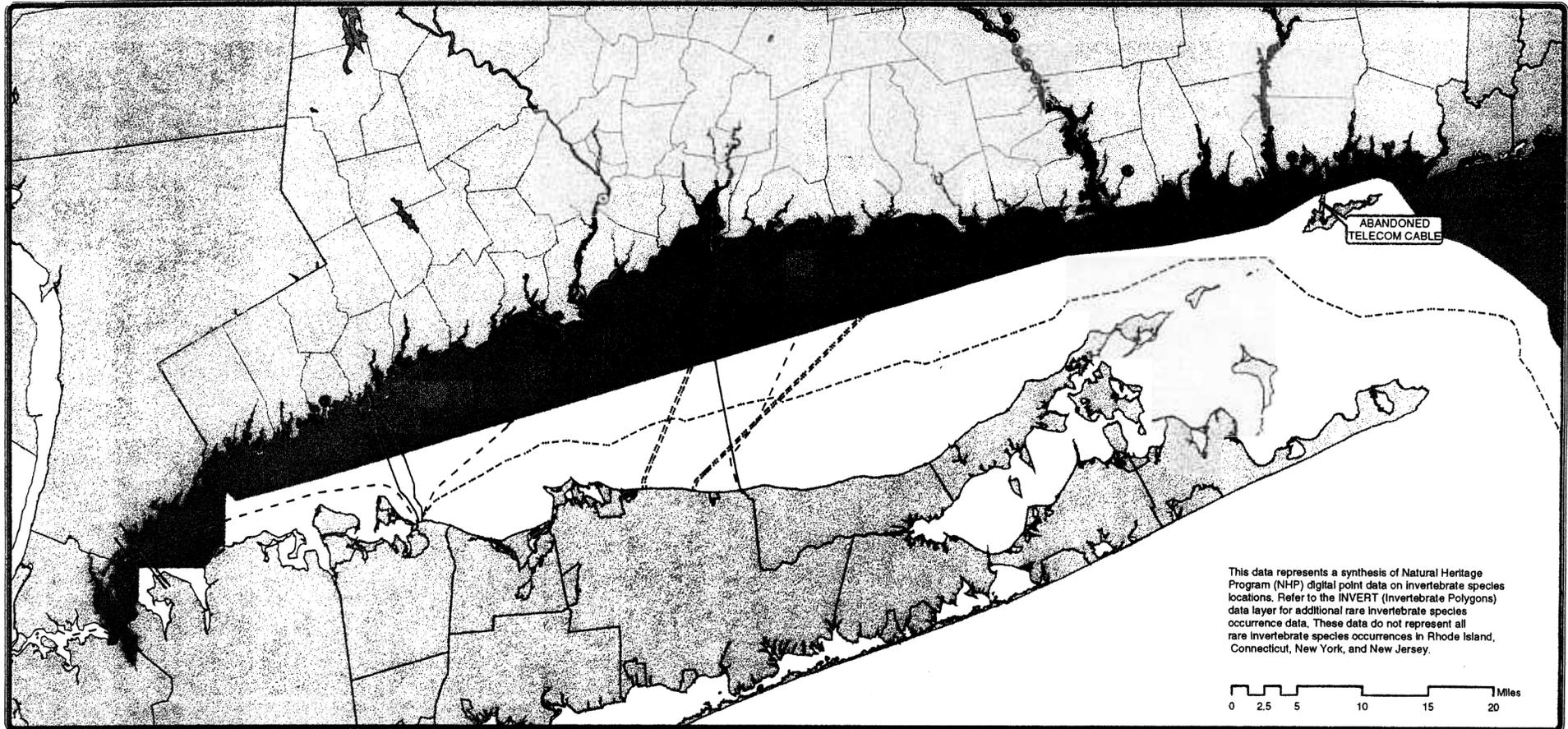
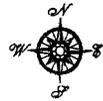
This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resource planning.

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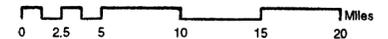
Date: 6/02/07
Figure: C-5

Source: From unpublished data - US EPA

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Invertebrate Species



This data represents a synthesis of Natural Heritage Program (NHP) digital point data on invertebrate species locations. Refer to the INVERT (Invertebrate Polygons) data layer for additional rare invertebrate species occurrence data. These data do not represent all rare invertebrate species occurrences in Rhode Island, Connecticut, New York, and New Jersey.



Legend

Invertebrates

- | | | | |
|----------------------------|----------------------|--------------------|-------------------------------|
| ● Eastern pondmussel | ● Tidewater mucket | ■ American lobster | ■ Northern quahog (hard clam) |
| ● Goldenrod stem borer | ● Tiger beetle | ■ Blue crab | ■ Puritan tiger beetle |
| ● Maritime sunflower borer | ● Turret snail | ■ Eastern oyster | ■ Softshell clam |
| ● Mottled duskywing | ● Woodland pondsnail | ■ Horseshoe crab | |
| ● Puritan tiger beetle | | ■ Longfin squid | |

This data set contains sensitive biological resource data for marine, estuarine, and terrestrial invertebrate species in coastal Rhode Island, Connecticut, New York, and New Jersey. Vector polygons in this data set represent invertebrate distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Rhode Island, Connecticut, New York, and New Jersey. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources, planning.

Legend

- - Gas Pipeline
- Electric Cable
- - - Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources

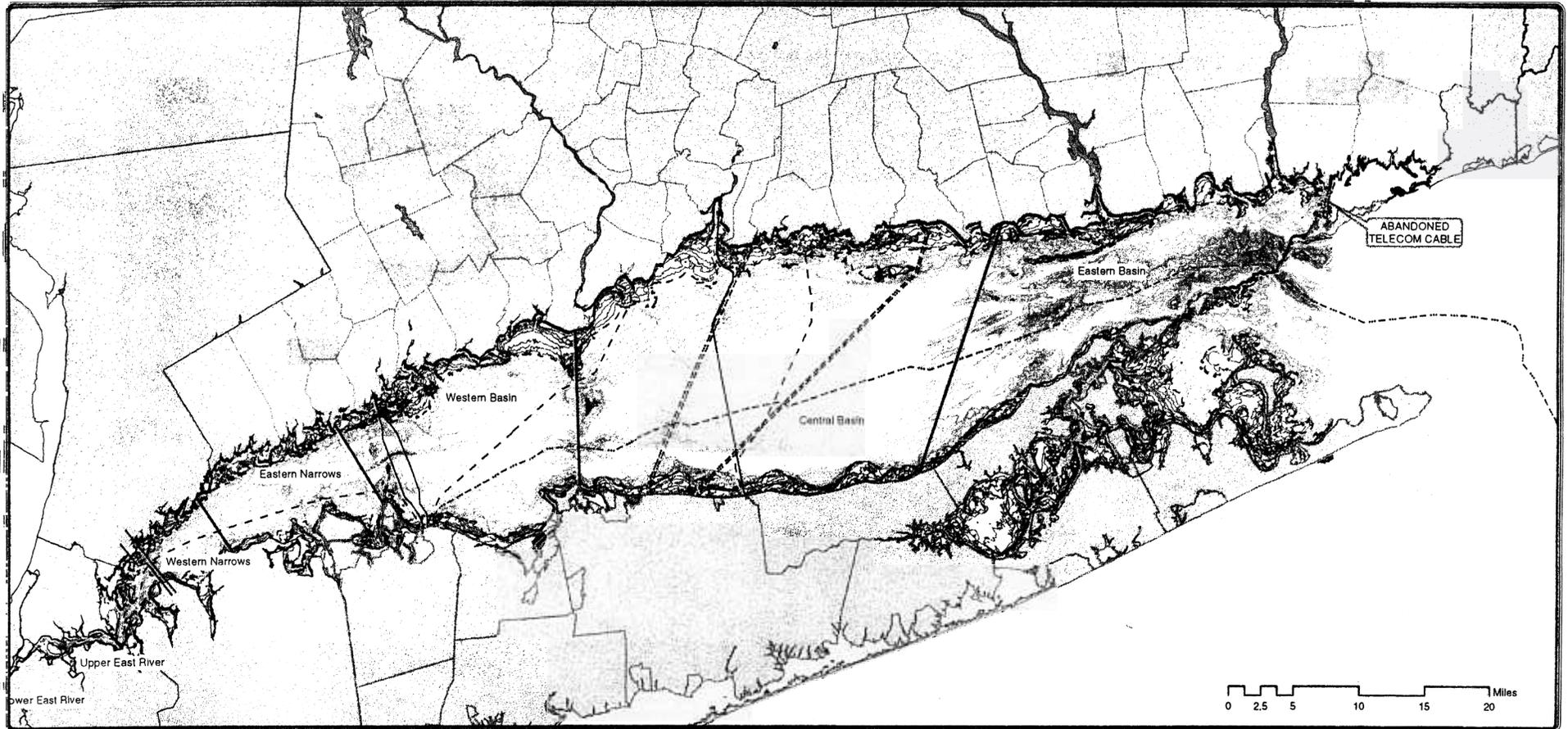
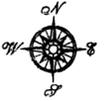


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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03
Figure: C-7

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Bathymetry



Legend

Depth in Meters

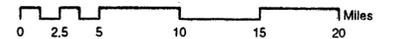
10 (Depth of Shellfish Habitat)	--- 33 - 42
11 - 23	--- 43 - 51
24 - 32	--- 52 - 62
	--- 63 - 76
	--- 77 - 88
	--- 89 - 110

Originator: Mary L. DiGiacomo-Co
 Originator: Mark Tedesco
 Originator: Chris Polloni
 Publication_Date: Unknown
 Title: LISBATHY: 1 m Digital Bathymetric Contours from
 NOAA Charts as Organized for the LISSGIS Library

Legend

- Gas Pipeline
- Electric Cable
- Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.



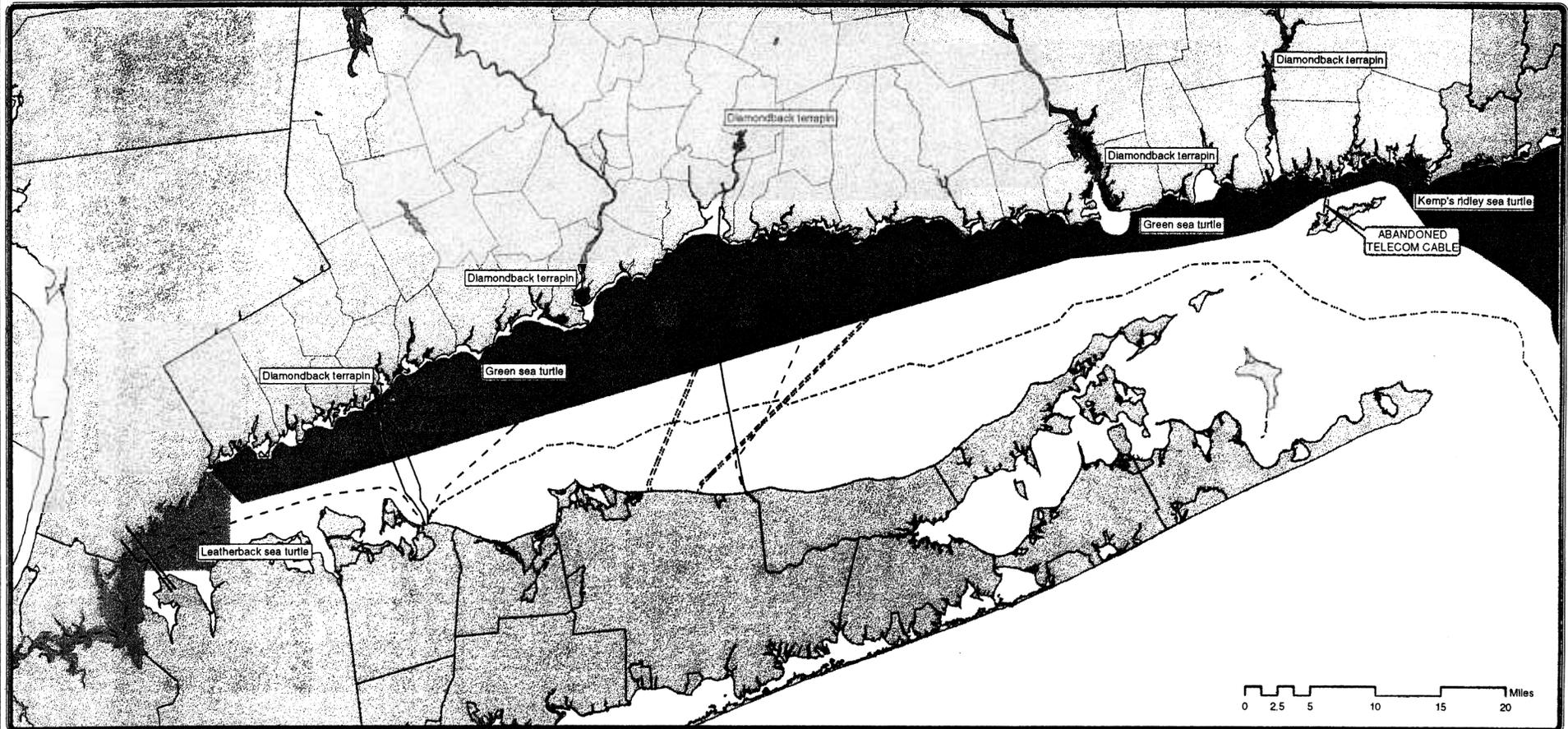
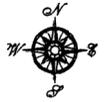


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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 06-02-03
Figure: C-6

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Reptile Species



Legend

General Distribution areas for Reptiles in Connecticut waters of Long Island Sound

-  Diamondback terrapin
-  Green sea turtle
-  Kemp's ridley sea turtle
-  Leatherback sea turtle

This data set contains sensitive biological resource data for threatened/ endangered sea turtles, diamondback terrapins, and rare reptiles/amphibians in coastal Rhode Island, Connecticut, New York, and New Jersey. Vector polygons in this data set represent concentration and nesting areas for terrapins and rare species, and general distribution areas for sea turtles. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Rhode Island, Connecticut, New York, and New Jersey.

Note: Green, Kemp's Ridley, Leatherback and Loggerhead sea turtle distributed throughout Long Island Sound.

Legend

-  Gas Pipeline
-  Electric Cable
-  Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.

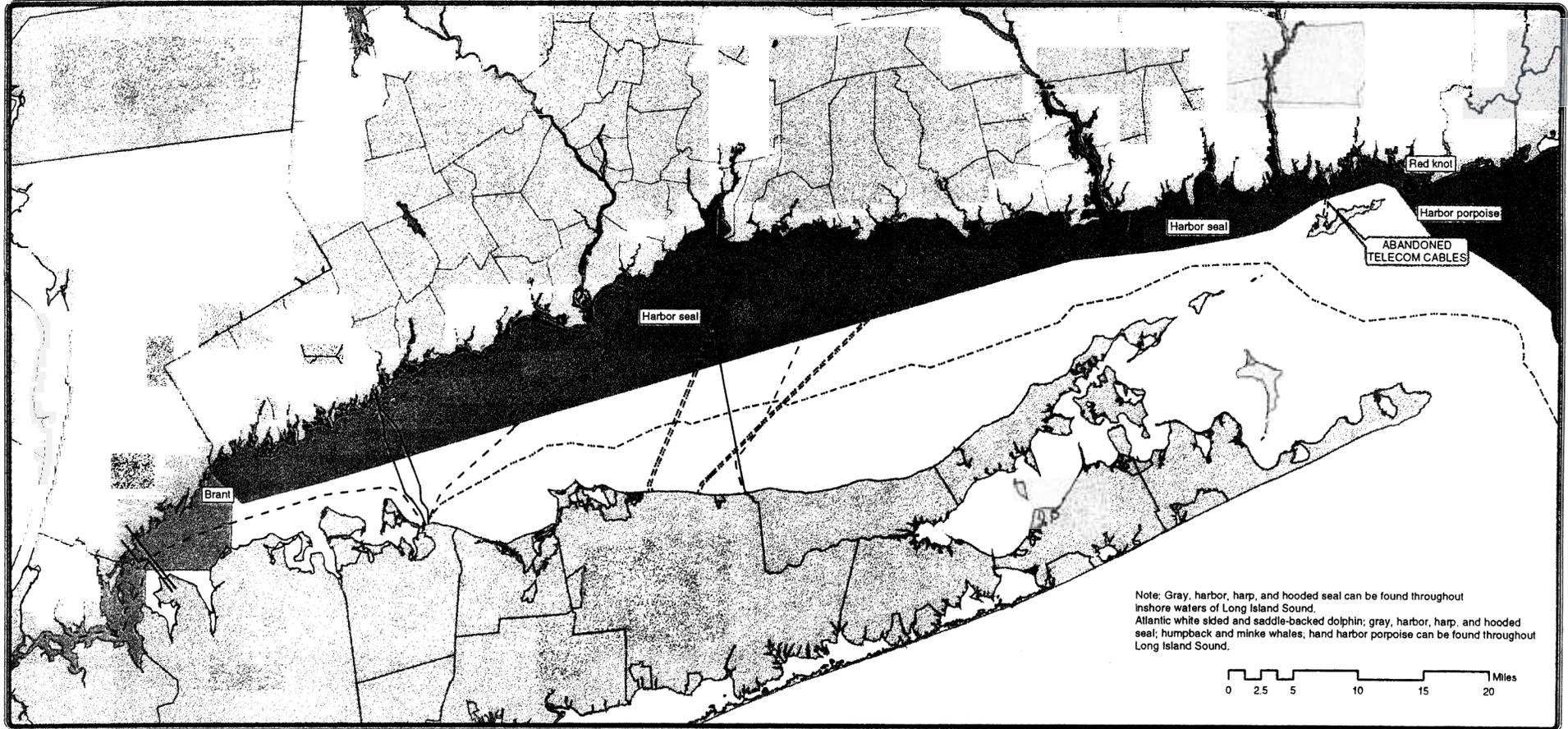
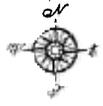


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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03
Figure: C-8

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Marine Mammals



Note: Gray, harbor, harp, and hooded seal can be found throughout inshore waters of Long Island Sound. Atlantic white sided and saddle-backed dolphin; gray, harbor, harp, and hooded seal; humpback and minke whales, and harbor porpoise can be found throughout Long Island Sound.

Legend

Marine Mammals

- Gray seal
- Harbor seal
- Seals

General Distribution areas for Marine Mammals in Connecticut waters of Long Island Sound

- Atlantic white-sided dolphin
- Gray seal
- Harbor seal
- Hooded seal
- Humpback whale
- Seals

This data set contains sensitive biological resource data for seals, whales, and dolphins in coastal Rhode Island, Connecticut, and the New York/New Jersey Metropolitan Area. Vector polygons in this data set represent marine mammal distribution and seal haul-out sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Rhode Island, Connecticut, and the New York/New Jersey Metropolitan Area. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil.

Legend

- - Gas Pipeline
- - Electric Cable
- - - Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.



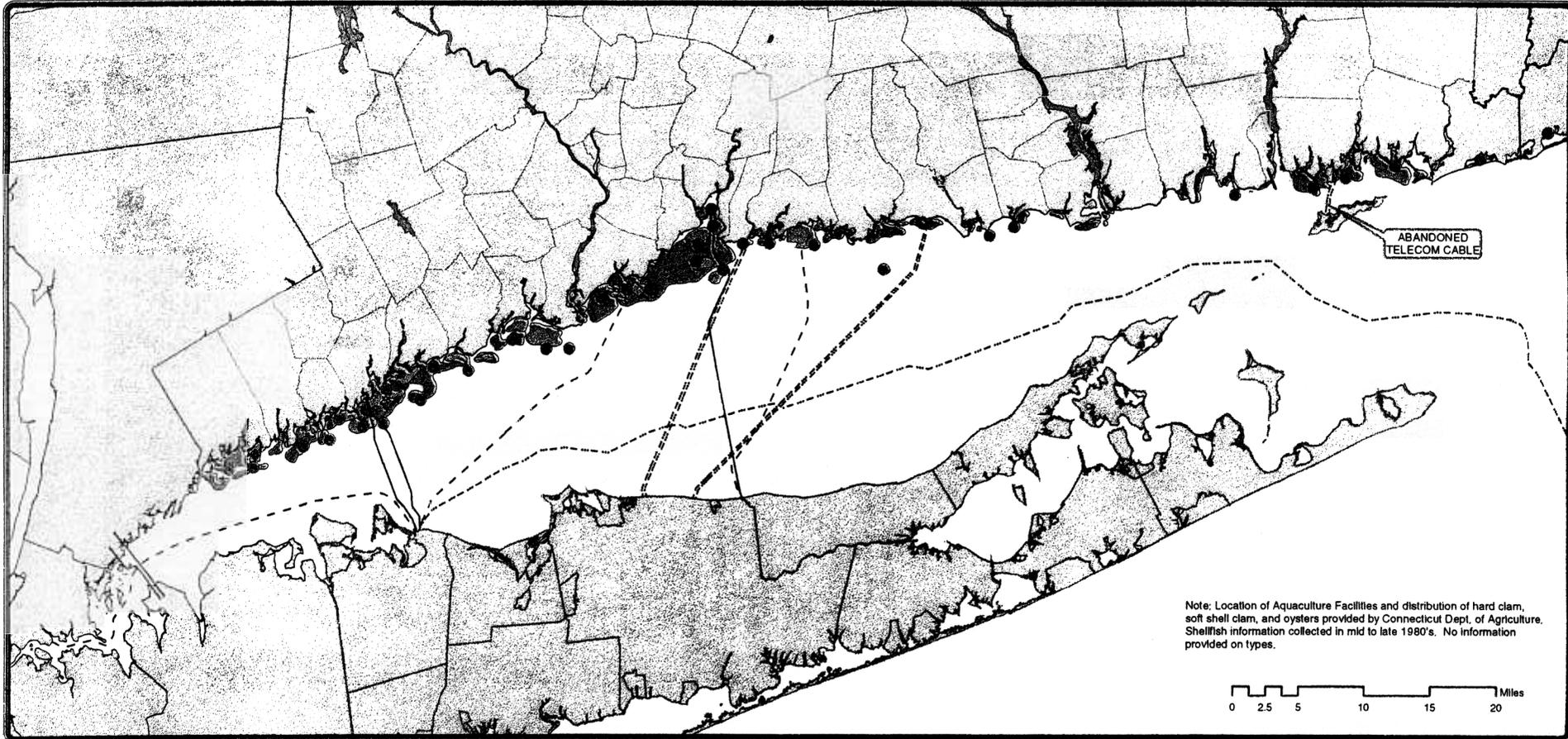
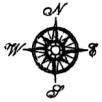
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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03
Figure: C-9

Existing & Proposed Infrastructure Crossings of Long Island Sound

Marine Environment- Shellfish Beds



Legend

- Aquaculture
- Soft Shell Clams
- Oyster Beds
- Hard Shell Clams

Aquaculture Source: Research Planning, Inc

Originator: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; State of Rhode Island, Department of Environmental Management, Providence, Rhode Island; and The Port Authority of New York & New Jersey.

Publication Date: 200203

Title: Rhode Island, Connecticut, New York, and New Jersey ESI: SOCECON (Socioeconomic Resource Points and Lines)

Aquaculture Sites are general locations as shown on NOAA-ESI maps. Detailed mapping of Leased beds available from Bureau of Aquaculture-Connecticut Department of Aquaculture.

Legend

- - Gas Pipeline
 - Electric Cable
 - - - Telecommunication Cable
- This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.



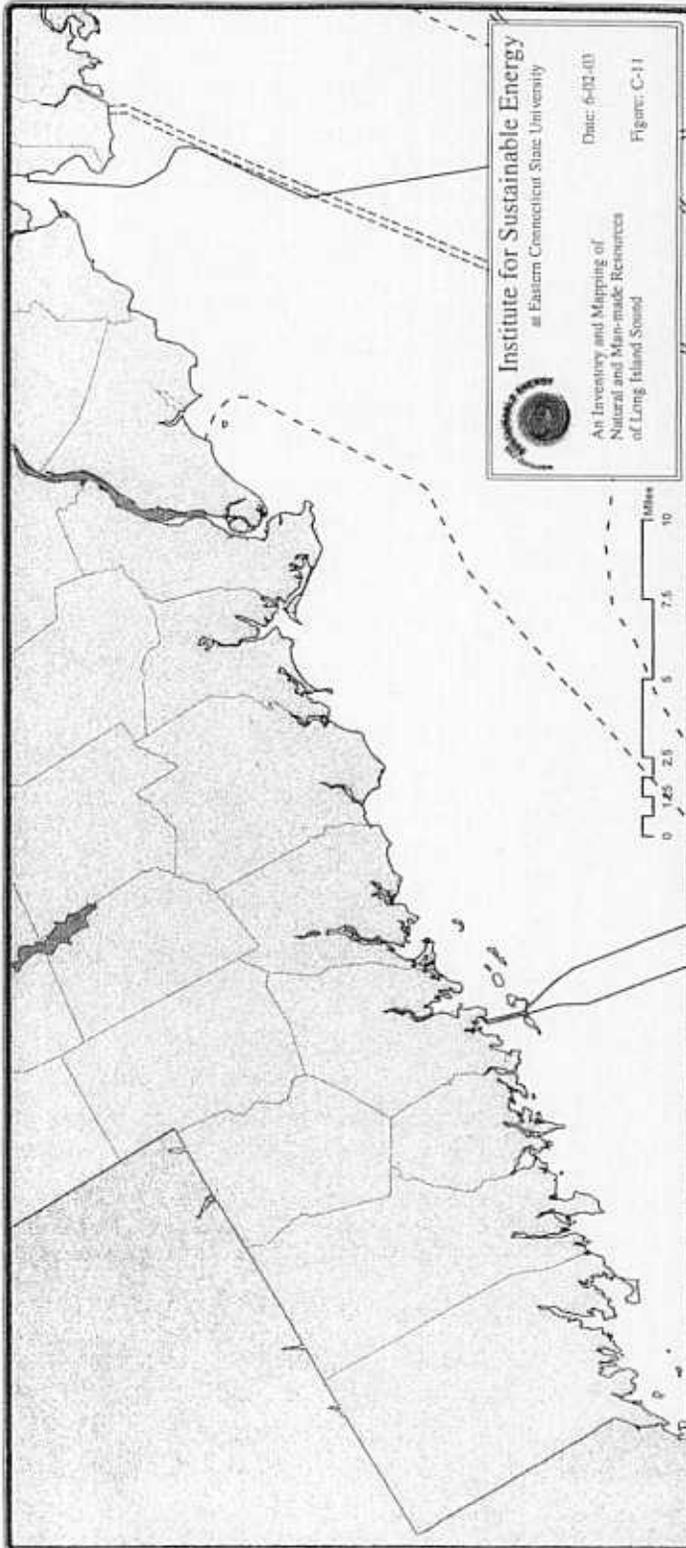
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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 06-02-03

Figure: C-10

Existing & Proposed Infrastructure Crossings of Long Island Sound Coastal Environment- Eelgrass Beds



- Legend**
- - Gas Pipeline
 - Electric Cable
 - - - Telecommunication Cable



Interpretation and Identification of Eelgrass beds located in the Long Island Sound Eastern Connecticut shoreline, Fishers Island NYS and the Northshore of Long Island NYS.
Generated from 1:20,000 True Color Aerial Photography, 6/18/02

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resource planning.

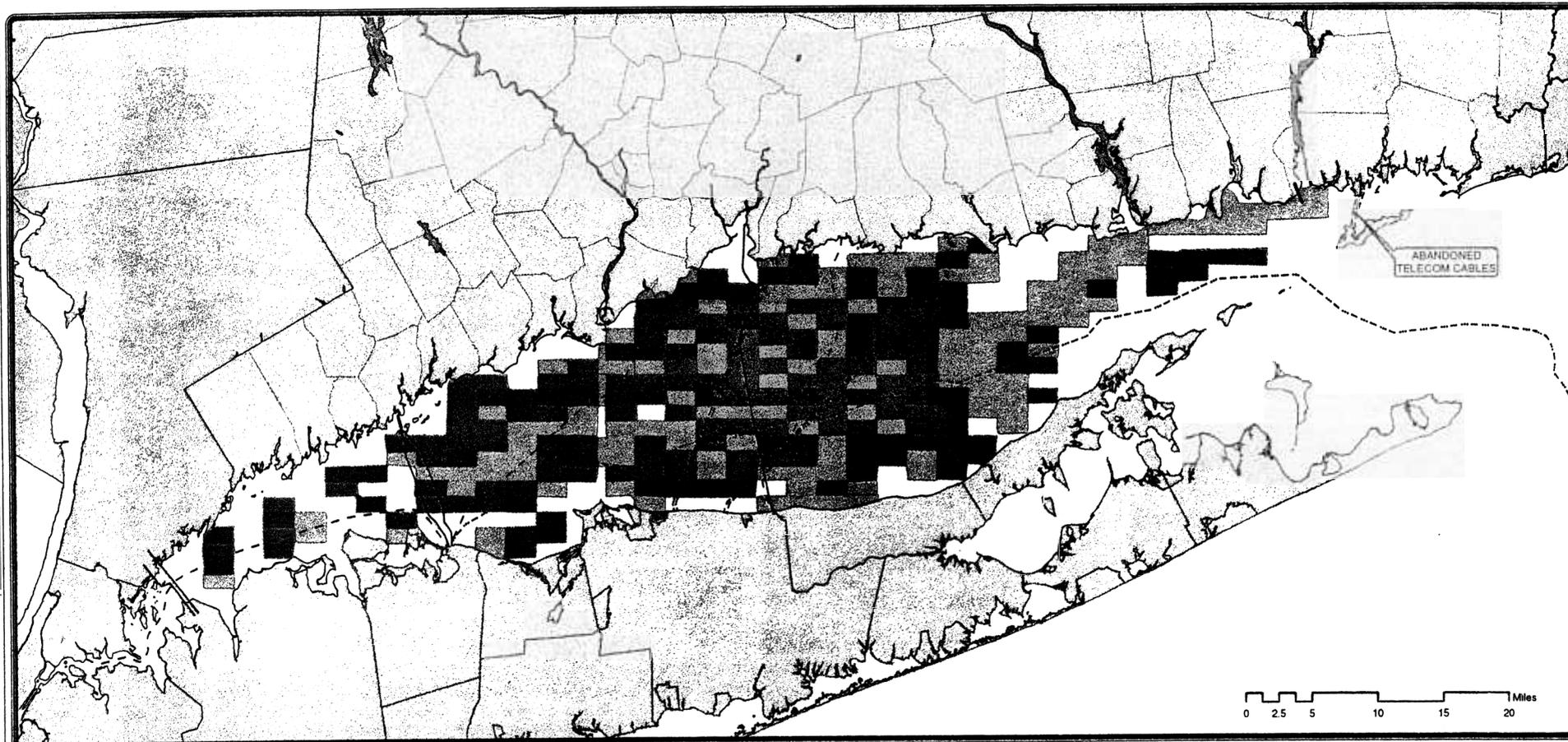
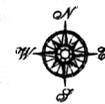
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Date: 6-10-03
Figure: C-11

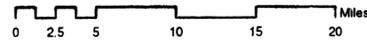
An Inventory and Mapping of
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Existing & Proposed Infrastructure Crossings of Long Island Sound

Marine Environment- Finfish (Vertebrate) biomass/tow density, 1992- 2002



ABANDONED TELECOM CABLES



Legend

Biomass/tow Density

- High
- Medium
- Low
- Areas not gridded are not sampled and no pot density data is presented.

Source: Connecticut Department of Environmental Protection Trawl Surveys, 1992-2002

Legend

- Gas Pipeline
- Electric Cable
- Telecommunication Cable

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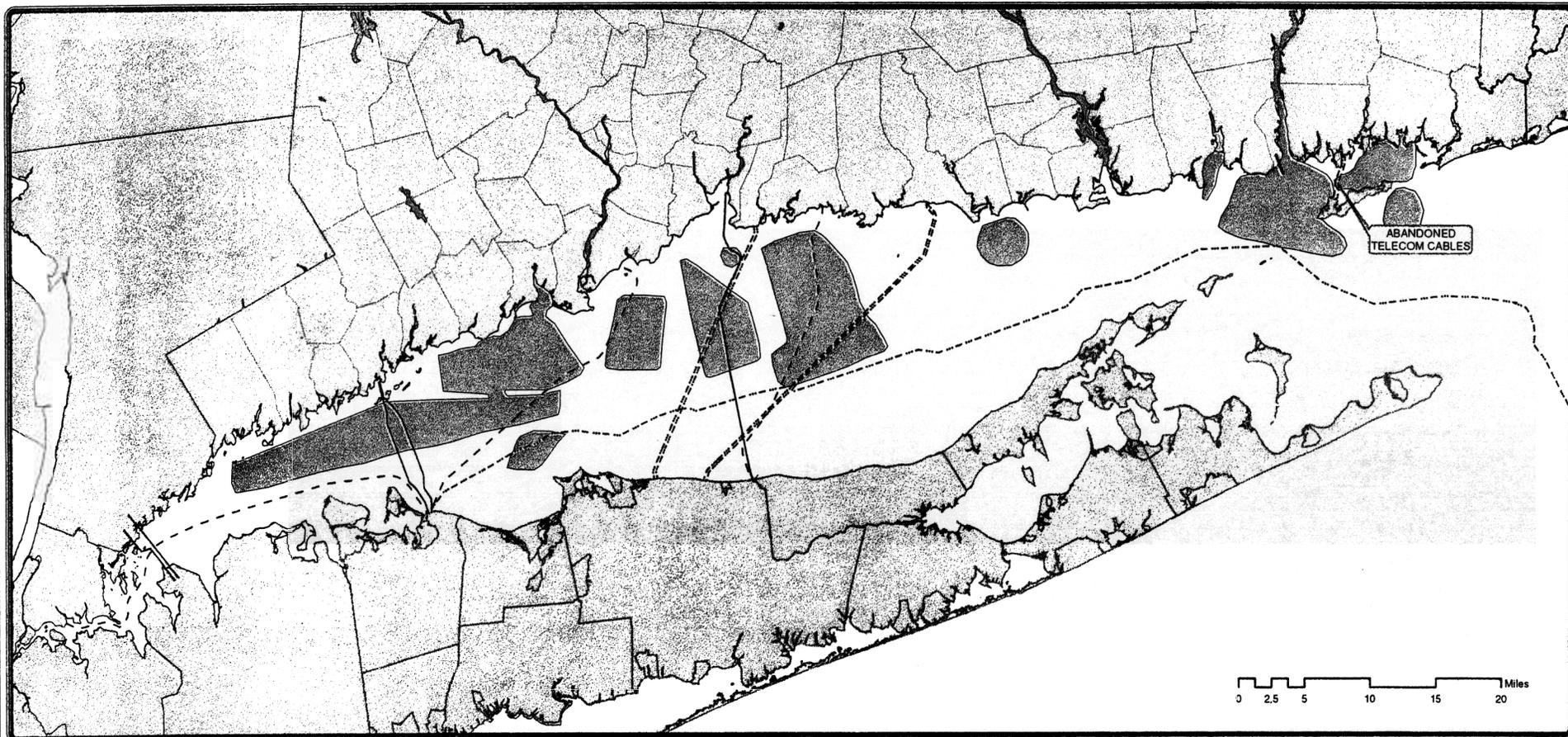
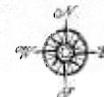
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An Inventory and Mapping of
Natural and Man-made Resources
of Long Island Sound

Date: 6-02-03

Figure: C-12

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Active Lobster Fishing Areas



ABANDONED TELECOM CABLES



Commercial lobster trap haul locations observed by DEP staff on sea-sampling trips. Depicts areas we directly observed being fished, presented such that the data may be released (not confidential)

- Legend**
- - Gas Pipeline
 - Electric Cable
 - - - Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning

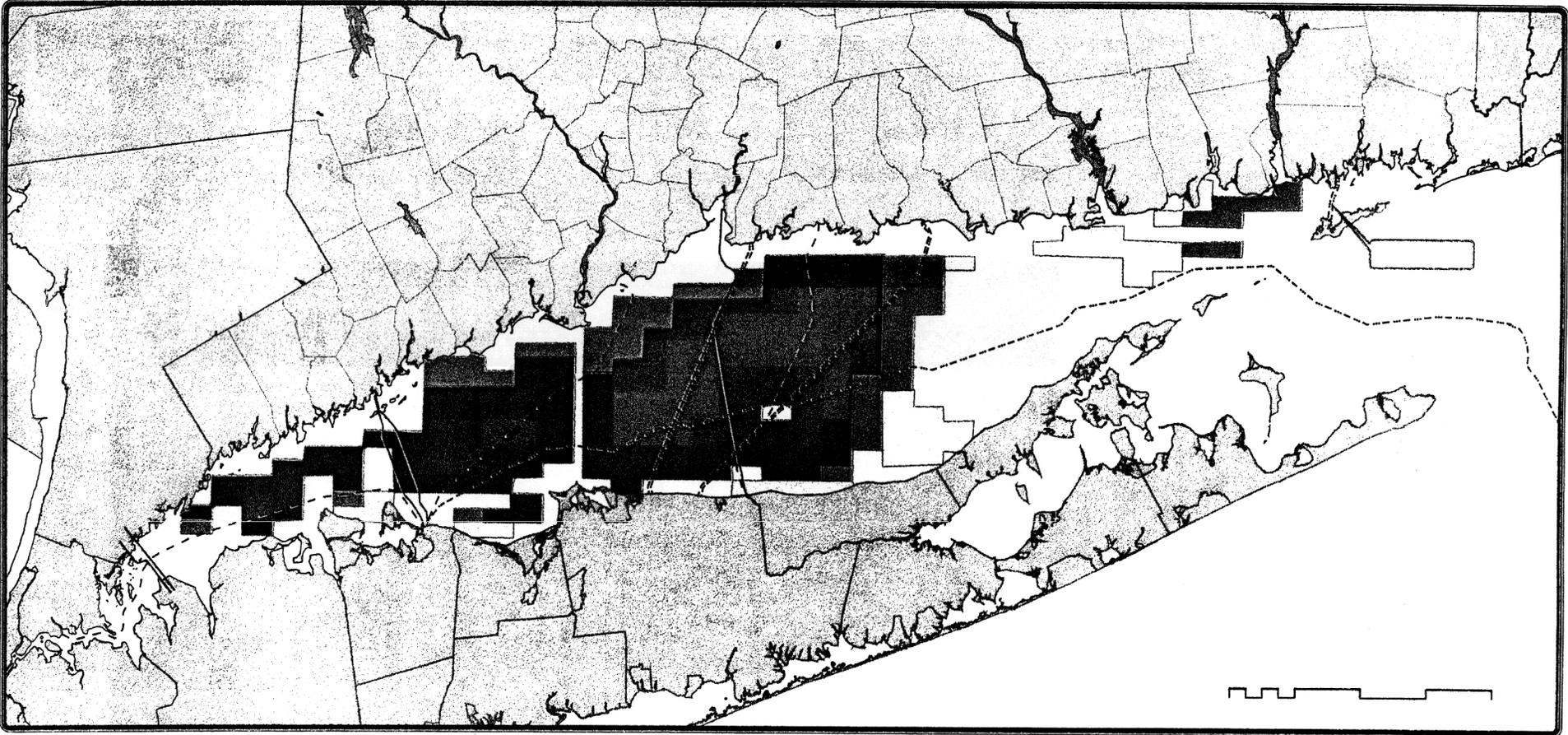
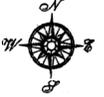


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An Inventory and Mapping of
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of Long Island Sound

Date: 6-02-03
Figure: C-13

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Lobster Pot Densities

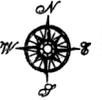


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Date: 6-02-03
Figure: C-14

Existing & Proposed Infrastructure Crossings of Long Island Sound Coastal Environment- Rare, Threatened, and Endangered Plants



Originator: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; State of Rhode Island, Department of Environmental Management, Providence, Rhode Island; and The Port Authority of New York & New Jersey. Publication Date: 200203

Title: Rhode Island, Connecticut, New York, and New Jersey ESI: HABPT (Habitat and Plant Points)

These data represent rare terrestrial plant species locations. Refer to the HABITATS (Habitat and Plant Polygons) data layer for additional native/rare terrestrial plant species occurrence data. These data do not represent all native/terrestrial plant species occurrences in Rhode Island, Connecticut, New York, and New Jersey.

The following habitats are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 59, Endangered plant, 60, Threatened plant; 214, Rare plant.

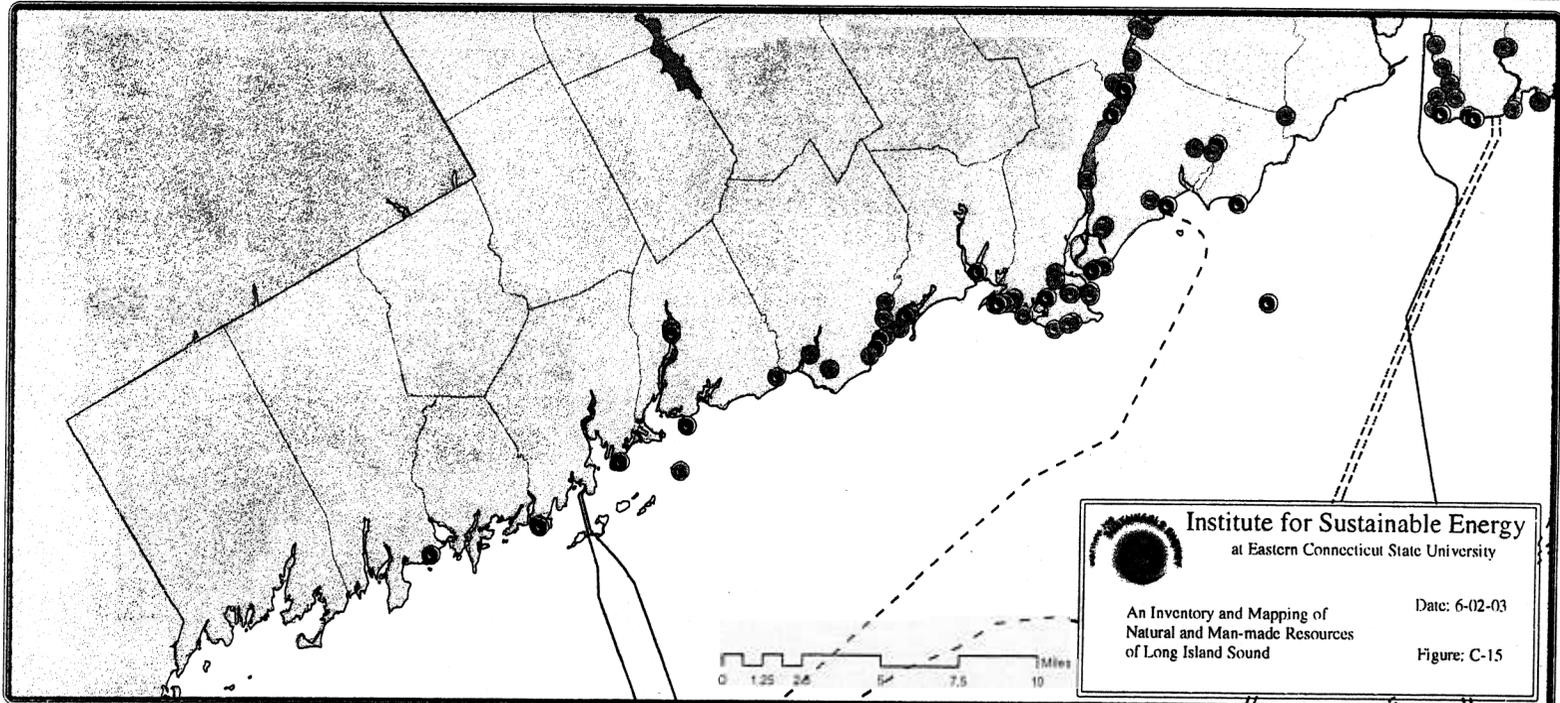
Note: Plants shown in Long Island Sound are located on islands.

Legend

- - Gas Pipeline
- Electric Cable
- · · · · Telecommunication Cable

- Endangered plant
- Rare plant
- Threatened plant

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.



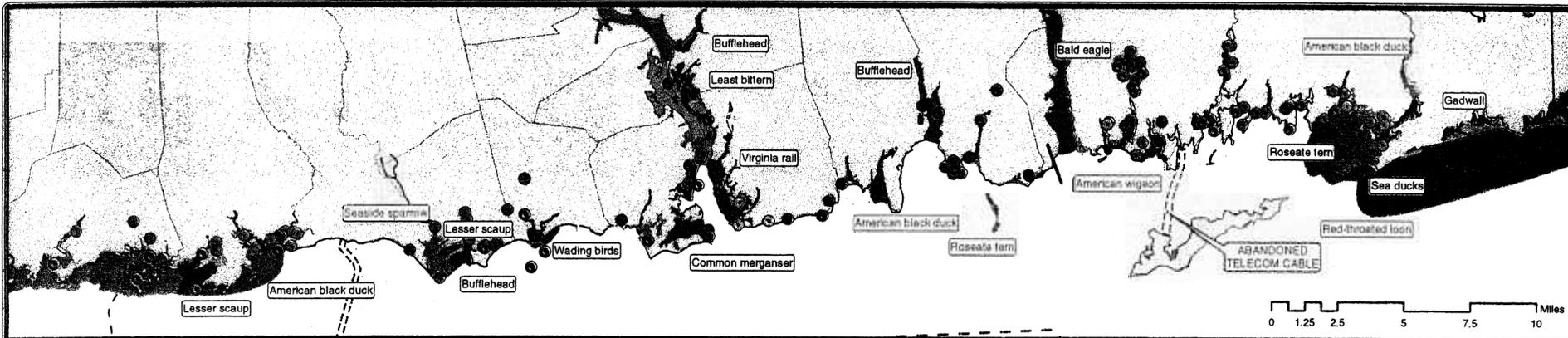
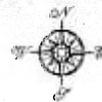


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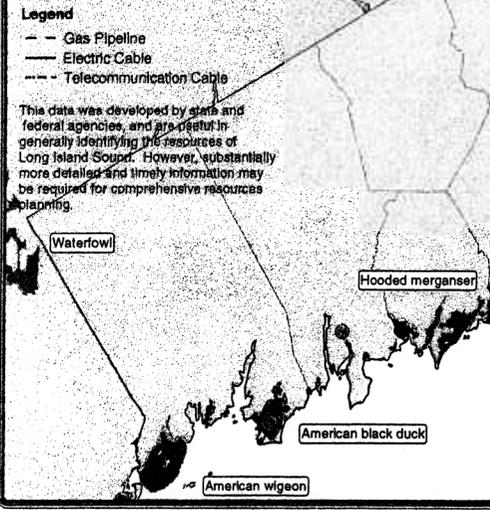
Date: 6-02-03
Figure: C-15

Existing & Proposed Infrastructure Crossings of Long Island Sound Coastal Environment- Sensitive Bird Habitat and Nesting Sites



- Legend**
- | | | |
|------------------------------------|----------------------------|---------------------|
| ● Nesting Sites | ■ American bittern | ■ Sea ducks |
| ● American ospreycatcher | ■ American black duck | ■ Scaup sparrow |
| ● Bald eagle | ■ American oystercatcher | ■ Shorebird |
| ● Blue-winged teal | ■ American wigeon | ■ Snowy egret |
| ● Brown thrasher | ■ Bald eagle | ■ Surf scow |
| ● Common barn owl | ■ Black skimmer | ■ Virginia rail |
| ● Common tern | ■ Brant | ■ Wading birds |
| ● Eastern meadowlark | ■ Bufflehead | ■ Waterfowl |
| ● Endangered osprey | ■ Canada goose | ■ Wood duck |
| ● Grasshopper sparrow | ■ Cattle egret | ■ Red-shouled hawk |
| ● Great egret | ■ Clapper rail | ■ Red-throated loon |
| ● Kingfisher | ■ Common loon | ■ Roseate tern |
| ● Lesser scaup | ■ Common merganser | ■ Savannah sparrow |
| ● Little blue heron | ■ Common tern | |
| ● Long-eared owl | ■ Diving ducks | |
| ● Mallard | ■ Double-crested cormorant | |
| ● Mute swan | ■ Gadwall | |
| ● Northern harrier | ■ Glossy ibis | |
| ● Osprey | ■ Goldeneye | |
| ● Piping plover | ■ Great black-backed owl | |
| ● Purple martin | ■ Great blue heron | |
| ● Raptor | ■ Great egret | |
| ■ Rice dining bird | ■ Greater scaup | |
| ■ Rare passenger bird | ■ Green heron | |
| ■ Rare raptor | ■ Green-winged teal | |
| ■ Roseate tern | ■ Gulls | |
| ■ Salt-marsh sharp-shinned sparrow | ■ Herring gull | |
| ■ Savannah sparrow | ■ Hooded merganser | |
| ■ Seaside sparrow | ■ Horned lark | |
| ■ Sedge wren | ■ King rail | |
| ■ Waterfowl | ■ Least tern | |
| ■ Whip-poor-will | ■ Lesser scaup | |
| ■ Wile | ■ Little blue heron | |
| ■ Yellow-breasted chat | ■ Long-eared owl | |
| ■ Yellow-crowned night-heron | ■ Mallard | |
| | ■ Mute swan | |
| | ■ Northern harrier | |
| | ■ Northern chowder | |
| | ■ Oldsquaw | |
| | ■ Osprey | |
| | ■ Piping plover | |
| | ■ Red-headed merganser | |

This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, pelagic birds, passerine birds, gulls and terns in coastal Rhode Island, Connecticut, New York, and New Jersey. Vector polygons in this data set represent locations of bird nesting, foraging, and roosting sites. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Rhode Island, Connecticut, New York, and New Jersey. ESI data characterizes the marine and coastal environments and wildlife by their sensitivity to spilled oil.



- Legend**
- Gas Pipeline
 - Electric Cable
 - Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.

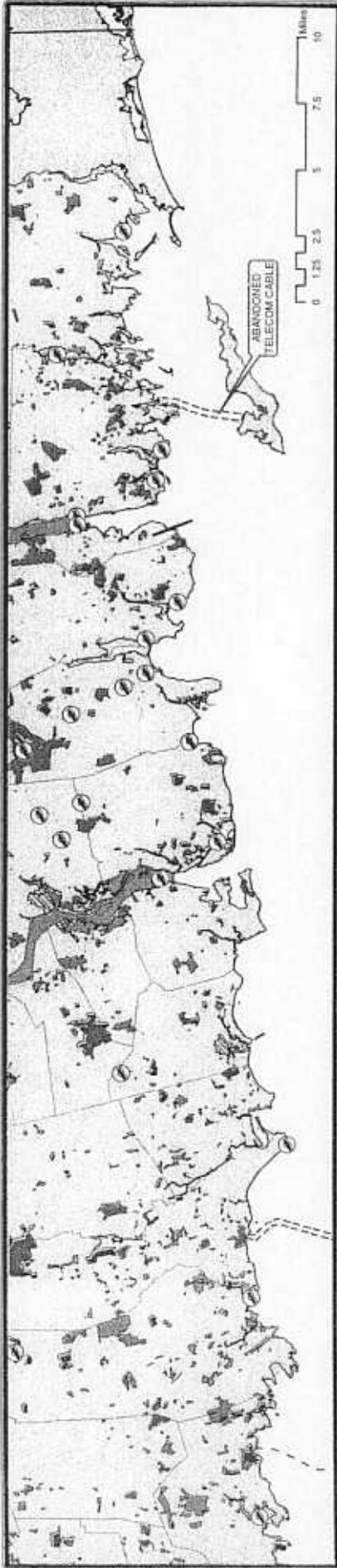


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Date: 6-02-03
Figure: C-16

Existing & Proposed Infrastructure Crossings of Long Island Sound Federal, State, Municipal and Private Open Space Properties



Property under the jurisdiction of Federal agencies such as the National Park Service, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers. It is a polygon Shapfile that includes holdings for the Appalachian Trail, National Wildlife Refuges, Food Control areas, and Connecticut River Gateway Scenic easements. This information was compiled in 1994 by the Environmental and Geographic Information Center, Department of Environmental Protection (DEP) using information from the Federal agencies.

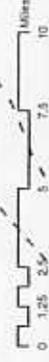
Property owned and maintained by the Connecticut Department of Environmental Protection. It is a polygon Shapfile that includes state fish hatcheries, food control areas, historic preserves, natural area preserves, state forests, state parks, state park scenic reserves, state park trails, state owned waterbody access, wildlife areas, and wildlife sanctuaries. Each property polygon is assigned a DEP ID.

- Legend**
- ███ Federal Property
 - ███ DEP Property
 - ███ DEP DRINK WATERBODY
 - ███ FISH HATCHERY
 - ███ FLOOD CONTROL
 - ███ HISTORIC PRESERVE
 - ███ NATURAL AREA SCENE
 - ███ OTHER
 - ███ STATE FOREST
 - ███ STATE PARK
 - ███ STATE PARK SCENIC RESERVE
 - ███ STATE PARK TRAIL
 - ███ WATER ACCESS
 - ███ WILDLIFE AREA
 - ███ WILDLIFE SANCTUARY
- Municipal and Private Open Space**
- ███ Cemetery
 - ███ Conservancy
 - ███ Existing Preserved Open Space
 - ███ General Recreation
 - ███ Parkland
 - ███ Recreation
 - ███ School
 - ███ Unincorporated

Municipal and Private property owned by Connecticut organizations for the purpose of preserving open space. It is a polygon Shapfile that primarily includes land conservation trust property, town open space, parks, school playgrounds, and open spaces. This information is derived from national property and geographic information system data compiled by the Environmental Protection Department (EPA) and the Office of Policy and Management (OPM). Over the course of many years, DEP and OPM periodically collected and updated the mapping of municipal and private open space based on information obtained from municipalities and land trust organizations. DEP and OPM mapped the open space property boundaries on 7 1/2 Minute U.S. Geological Survey topographic quadrangle maps and digitized them at a 1:24,000 scale (1 inch = 2,000 feet).

- Legend**
- - - Gas Pipeline
 - - - Electric Cable
 - - - Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resource planning.

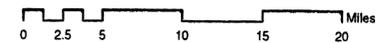
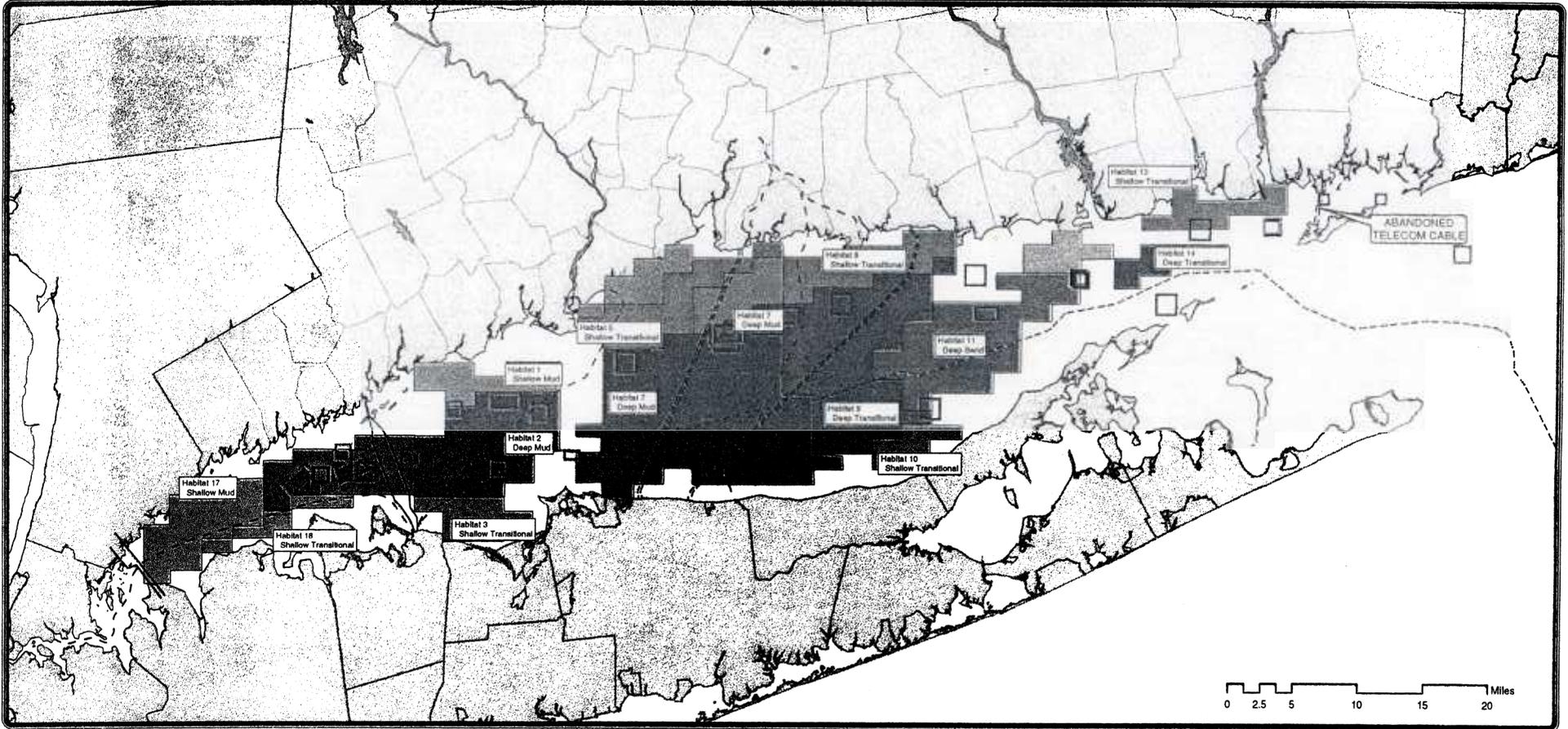


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An Inventory and Mapping of
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Date: 6-02-03
Figure: C-17

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Disposal Sites



Legend

DISPOSAL SITE STATUS	HABITATS
Current Disposal Site	Deep Mud
Previous Disposal Site	Deep Sand
Proposed Disposal Site	Deep Transitional
Interim Disposal Site	Shallow Mud
Interim Plan Disposal Site	Shallow Sand
Historic Disposal Site	Shallow Transitional

These data were collected/compiled for the Army Corps of Engineers (New England District) as part of the Disposal Area Monitoring System (DAMOS) project. None of these data should be used for navigational purposes. The data are only valid for the date on which they were acquired. The user is responsible for the results of any application of the data for other than the intended purpose.

Originator: SAIC Newport RI
 Publication Date: Fall 1999; last updated April 2002
 Title: All Disposal Site Polygon Boundaries (disp_sites_all.shp)
 Description: Ocean disposal site boundaries associated with the DAMOS program.

Legend

- Gas Pipeline
- Electric Cable
- Telecommunication Cable

This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resources planning.

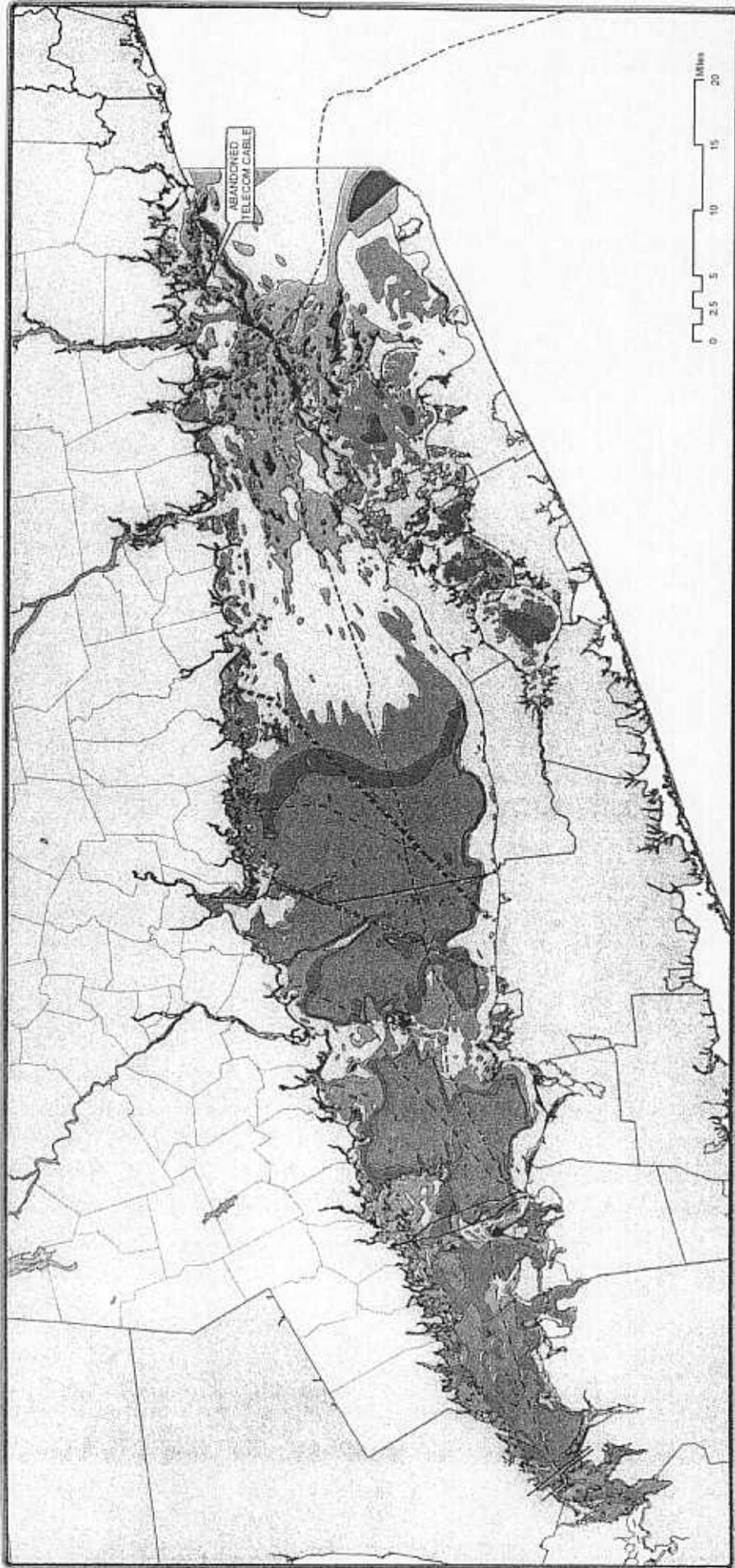


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An Inventory and Mapping of
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Date: 06-02-03
Figure: C-19

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Surface Sediment Textures



- Legend**
- Gravel or Bedrock
 - Gravelly Sand
 - Sand
 - Sandy Silt, Clayey Silt, or Silt
 - Silt-Clay/Sand
 - Sand-Silt-Clay
 - Silt-Clay

Originator: Lawrence J. Poppel(comp.) Barbara A. Seekins(comp.) Publication Date: 2000
 Title: Distribution of Surficial Sediments in Long Island Sound
 Publication Information: Woods Hole Field Center, Woods Hole, MA
 Publisher: U.S. Geological Survey

Legend

- Gas Pipeline
- Electric Cable
- Telecommunication Cable

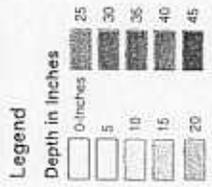
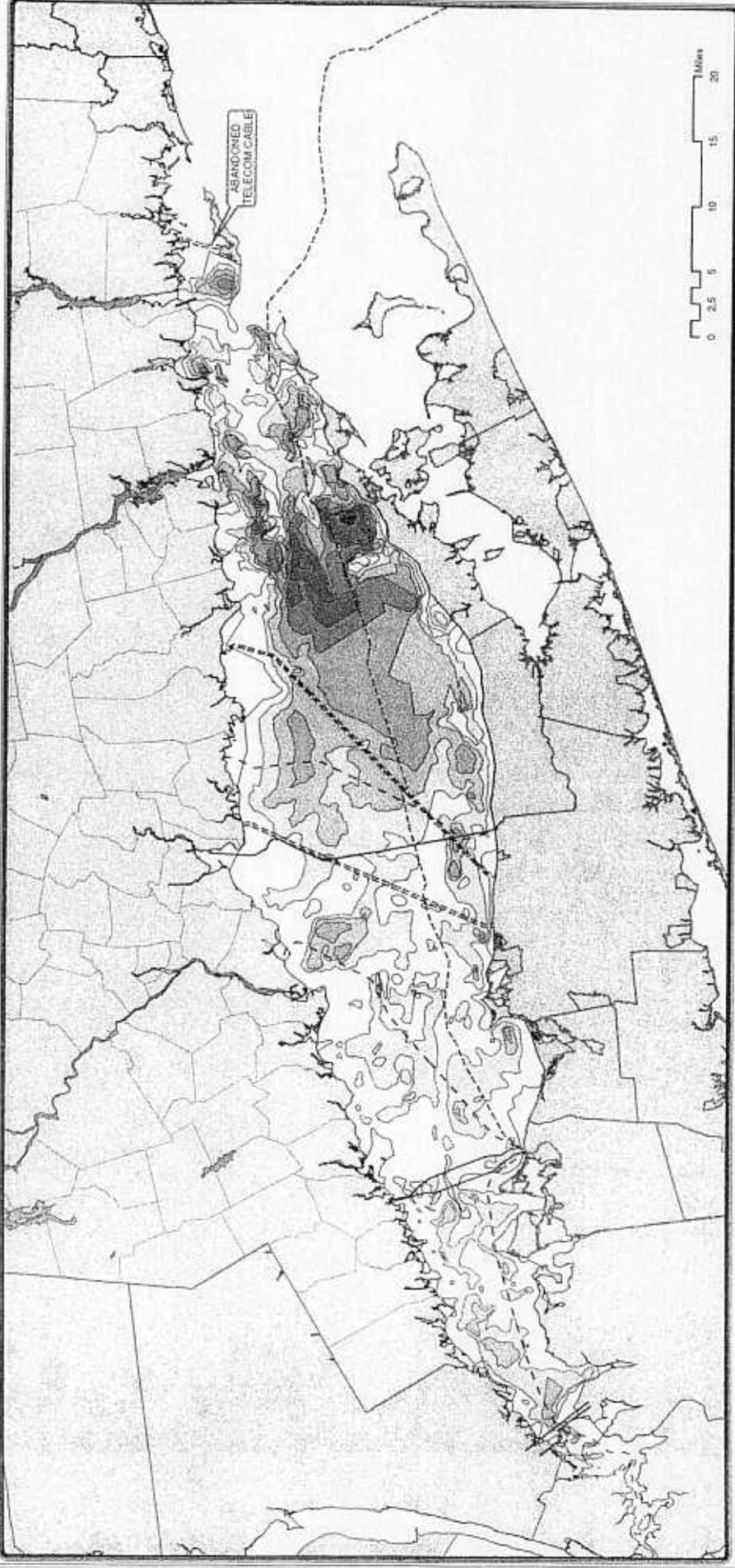
This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resource planning.

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An Inventory and Mapping of
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 Figure: C-20

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Thickness of Post Glacial Sediments



Note: Thickness of Post Glacial Sediments as determined by high-resolution seismic-reflection profiles.

Legend

- - Gas Pipeline
- Electric Cable
- - - Telecommunication Cable

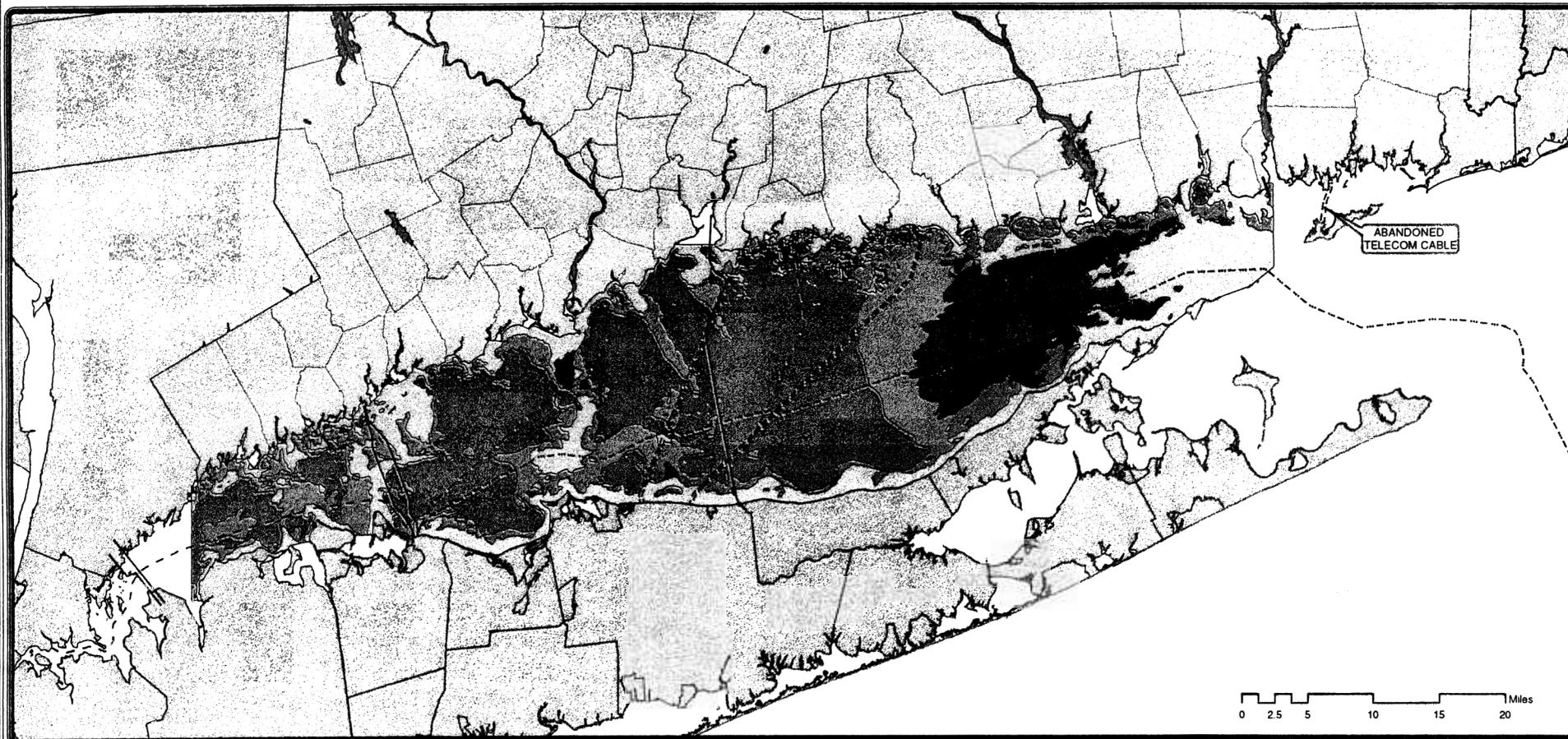
This data was developed by state and federal agencies, and are used in general to identify the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resource planning.

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Figure: C-21

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Sedimentary Environments



Legend

-  erosion or nondeposition
-  coarse-grained bedload transport
-  sorting & reworking
-  fine-grained deposition

Originator: Harley Knebel VecAnn Cross, Publication_Date: 2000
 Title: Sedimentary Environment Map of Long Island Sound in ArcView Shapefile Format
 Publication_Information: Woods Hole Field Center
 Publisher: U.S. Geological Survey

Legend

-  Gas Pipeline
-  Electric Cable
-  Telecommunication Cable

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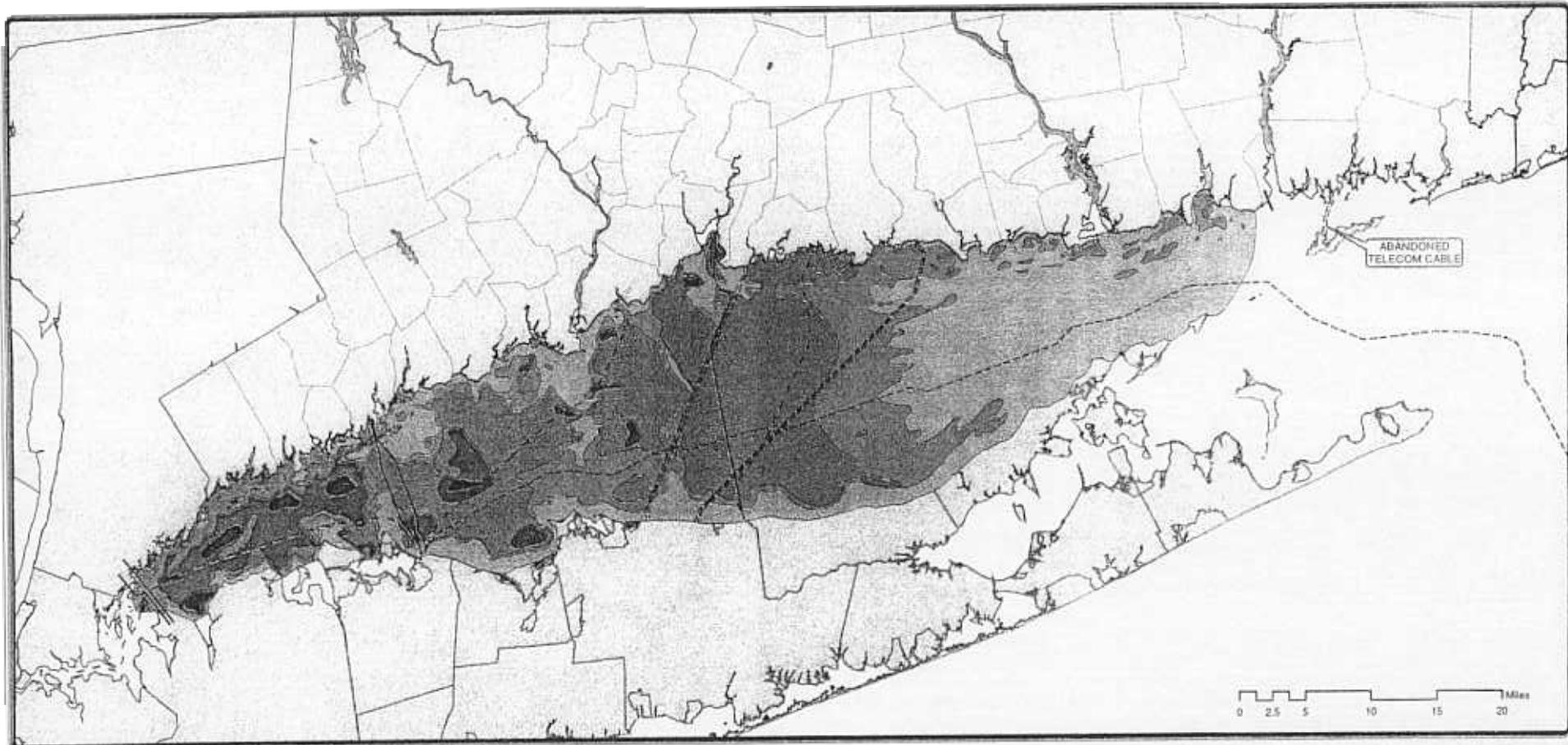
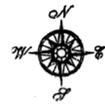
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An Inventory and Mapping of
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 of Long Island Sound

Date: 06-02-03

Figure: C-22

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- TOC (Total Organic Carbon Distribution)



Legend

- 0.00-0.49 % dry sediment
- 0.50-0.99 % dry sediment
- 1.00-1.99 % dry sediment
- 2.00-2.49 % dry sediment
- 2.50-2.99 % dry sediment
- >3.00 % dry sediment

Originator: Lawrence J. Poppe(comp.)
 Publication Date: 2000
 Title: Distribution of Total Organic Carbon (TOC) in Long Island Sound
 Publication Place: Woods Hole Field Center, Woods Hole, MA
 Publisher: U.S. Geological Survey
 Total Organic Carbon (TOC) in weight percent of dry sediment.

Legend

- Gas Pipeline
- Electric Cable
- Telecommunication Cable

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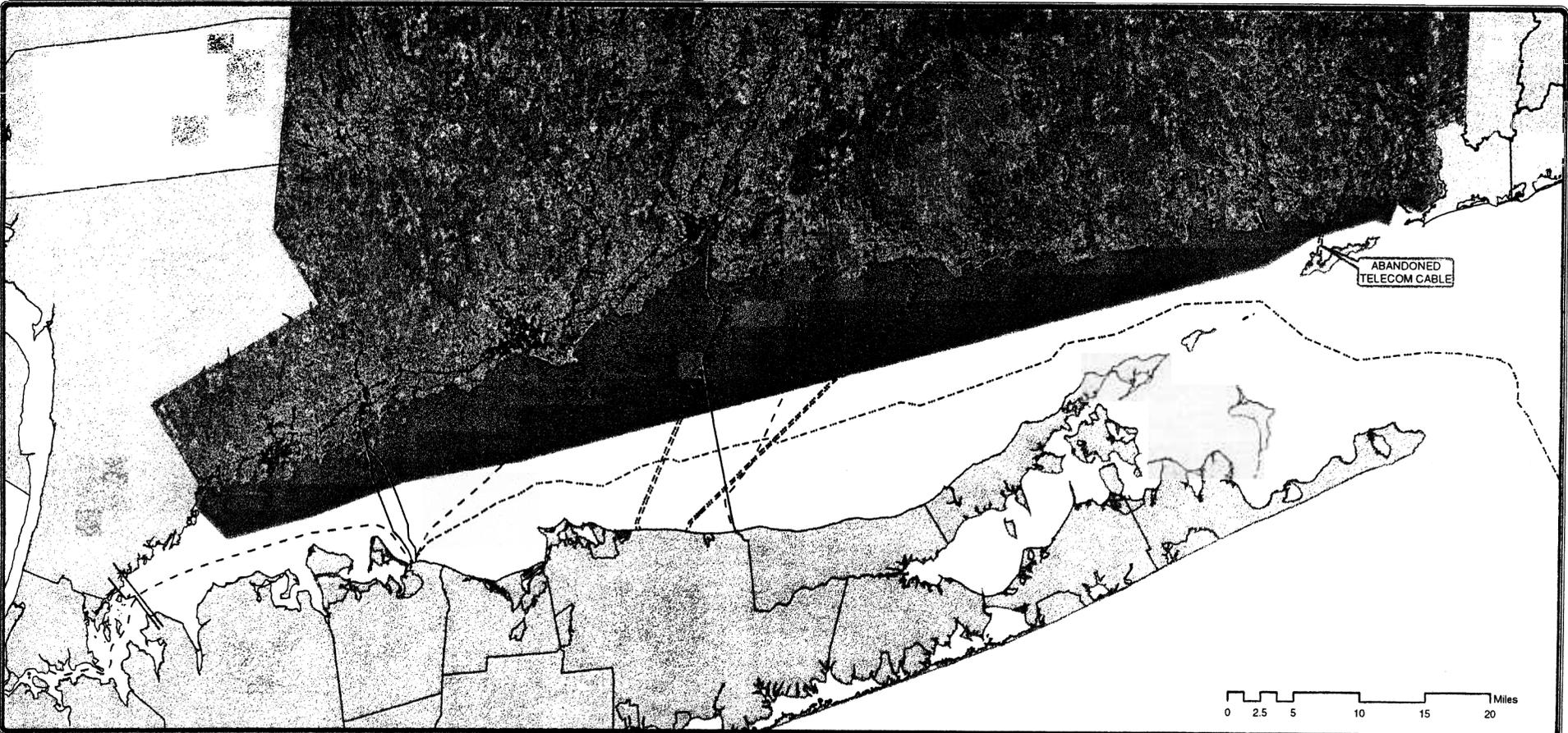
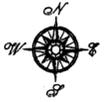


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An Inventory and Mapping of
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Date: 06-02-03
Figure: C-23

Existing & Proposed Infrastructure Crossings of Long Island Sound Built Environment- Landuse 1997



Legend

Comm & Indust & Pavement	Exposed Soil / Cropland	Dead & Dying Hemlock	Coniferous Forested Wetland
Residential & Commercial	Exposed Soil	Forest / Clear Cut	Low Coastal Marsh
Rural Residential	Shade-grown Tobacco	Mixed Forest	High Coastal Marsh
Turf & Tree Complex	Nursery Stock	Deep Water	Exposed Ground & Sand
Turf & Grass	Scrub & Shrub	Shallow Water & Mud Flats	
Pasture & Hay & Grass	Deciduous Forest	Non-forested Wetland	
Pasture & Hay / Cropland	Deciduous Forest & Mt Laurel	Deciduous Shrub Wetland	
Pasture & Hay / Exposed Soil	Coniferous Forest	Deciduous Forested Wetland	

Originator: Hitt, K.J.
 Publication Date: 1997
 Title: Digital map file of major land uses in the United States
 Edition: 1
 Geospatial_Data_Presentation_Form: map
 Publication_Information:
 Publication_Place: Reston, Virginia
 Publisher: U.S. Geological Survey

Legend

Gas Pipeline
Electric Cable
Telecommunication Cable

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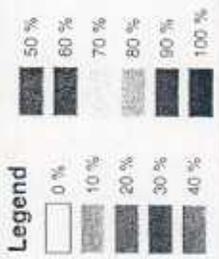
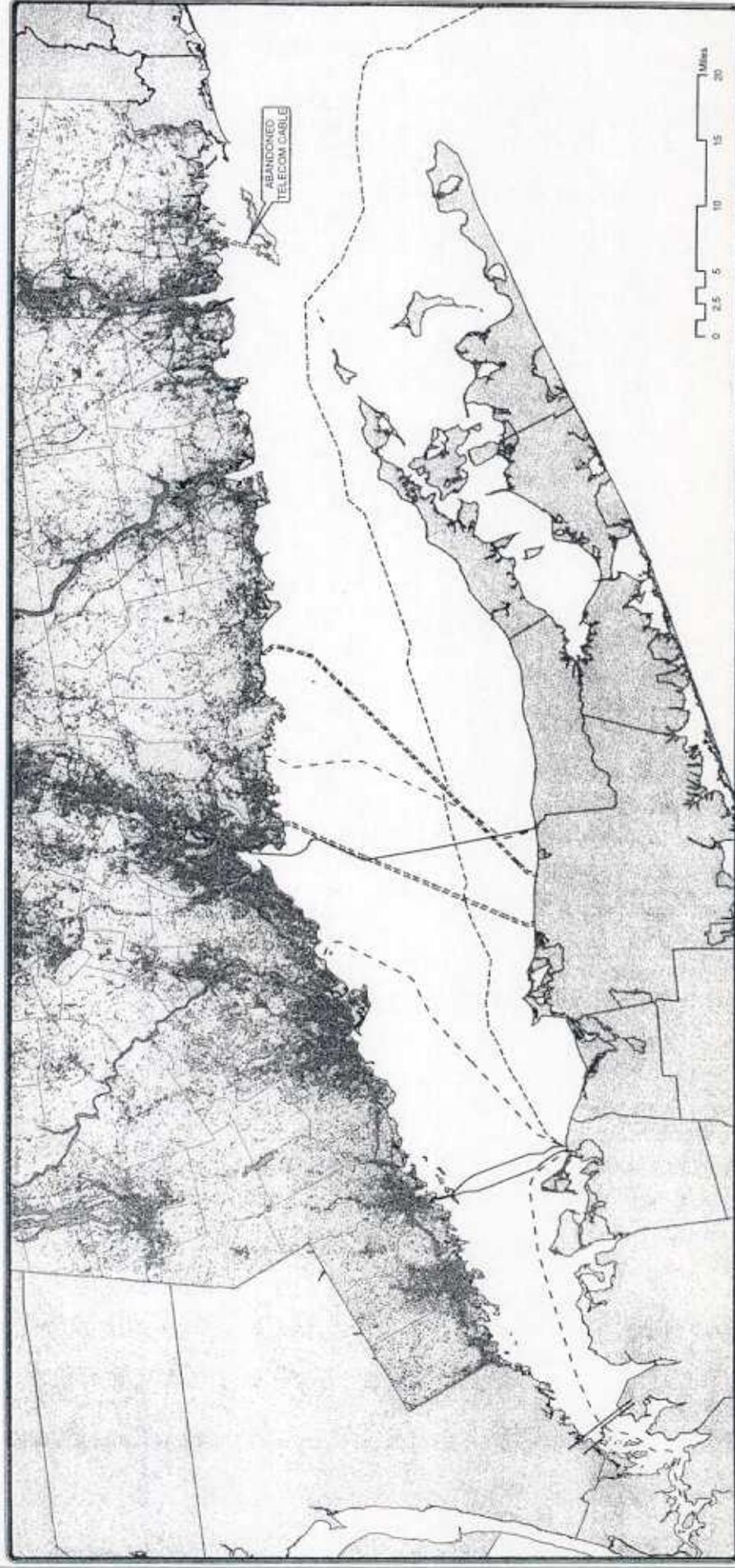
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of Long Island Sound

Figure: C-24

Existing & Proposed Infrastructure Crossings of Long Island Sound Built Environment- Percent Urban



Legend

- - Gas Pipeline
- - - Electric Cable
- Telecommunication Cable

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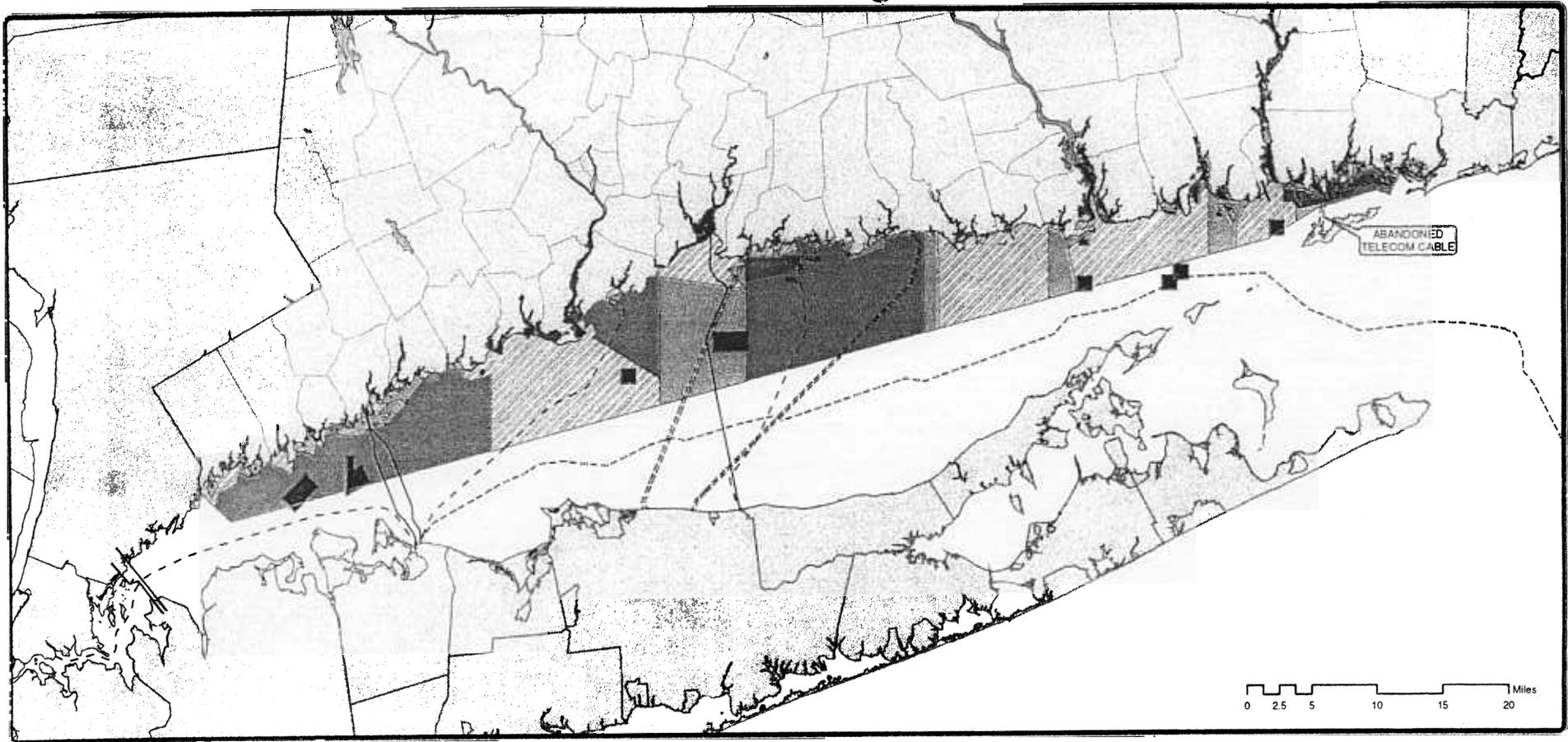
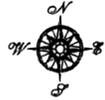
Originator: HEI, K.J.
 Publication Date: 1995
 Title: Digital map file of major land uses in the United States
 Edition: 1
 Geographic Data Presentation Form: map
 Publication Information:
 Publication Place: Reston, Virginia
 Publisher: U.S. Geological Survey

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An Inventory and Mapping of
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Date: 6-02-03
 Figure: C-25

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Shellfishing Restricted Areas



Legend

- Leased Shellfish Areas
- Conditionally Restricted-Relay/Depuration
- Conditionally Restricted-Relay/Depuration, Exclusive
- Shellfish Restricted Areas
- Prohibited
- Restricted-Relay
- Approved
- Restricted-Relay/Depuration
- Conditionally Approved
- Restricted-Relay/Exclusive
- Cond Restricted-Relay

Legend

- Gas Pipeline
- Electric Cable
- Telecommunication Cable

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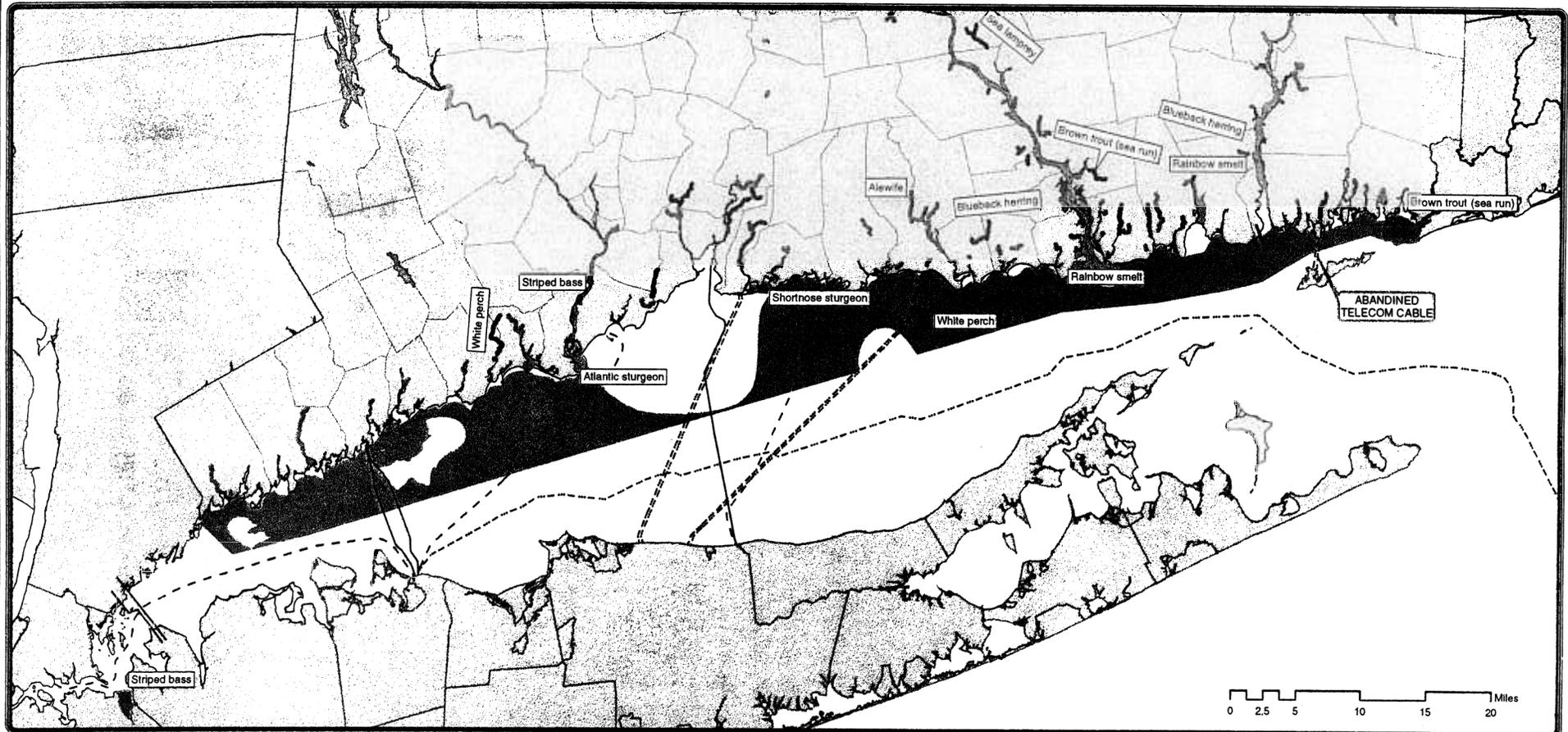
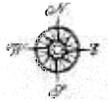
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An Inventory and Mapping of
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of Long Island Sound

Date: 06

Figure

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- General Distribution Areas of Anadromous Fish Species



Legend

Anadromous Fish Runs
(Adult spawning and
juvenile/adult fish passage)
Source: CT DEP 1993 maps

— American shad
— Blueback herring
— Brown trout (sea run)
— Sea lamprey
— White perch

Distribution of Anadromous Fish

■ Alewife
■ Anadromous fish
■ Atlantic sturgeon
■ White perch

■ Brown trout (sea run)
■ Rainbow smelt
■ Shortnose sturgeon
■ Striped bass

This data set contains sensitive biological resource data for marine, estuarine, and anadromous fish species in coastal Rhode Island, Connecticut, New York, and New Jersey. Vector polygons in this data set represent fish distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Rhode Island, Connecticut, New York, and New Jersey. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. Data includes broad distributional areas as well as important spawning areas as indicated by CT DEP.

Legend

— Gas Pipeline
— Electric Cable
- - - Telecommunication Cable

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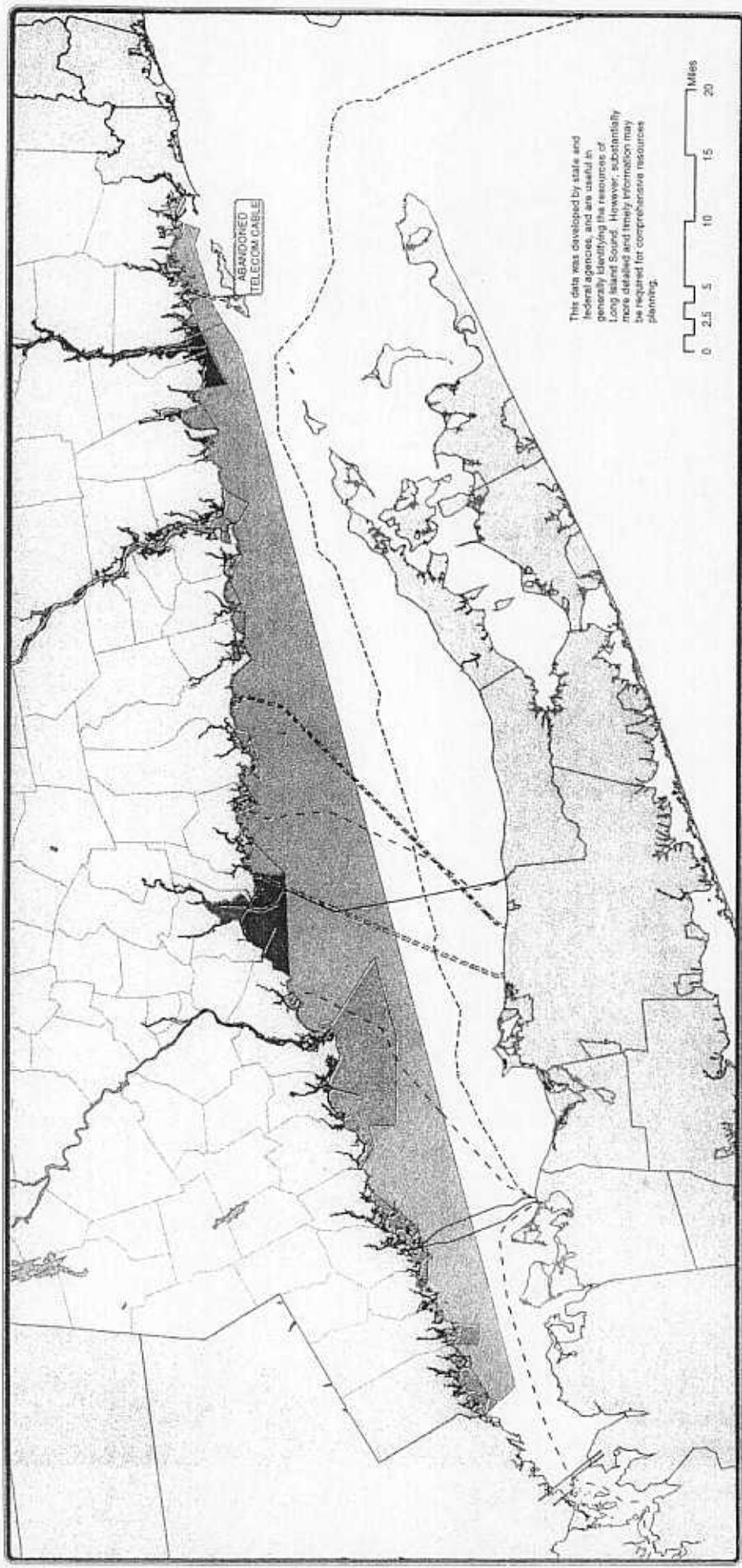
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Date: 6-02-03

Figure: C-27

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Coastal and Marine Surface Water Quality Classification



This data was developed by state and federal agencies, and are useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely information may be required for comprehensive resource planning.



Legend

Water Quality Classifications

SA	SC/SB
SB	SD/SA
SB/SA	SD/SB
SC/SA	

Coastal and Marine Surface Waters

Class SA
Designated uses: marine fish, shellfish and wildlife habitat, and fish harvesting for direct human consumption, recreation and all other legitimate uses including navigation.

Class SB
Designated uses: marine fish, shellfish and wildlife habitat, shellfish harvesting for transport to approved areas for purification prior to human consumption, recreation, habitat and other legitimate uses including navigation.

Legend

- - Gas Pipeline
- - - Electric Cable
- - - - - Telecommunication Cable

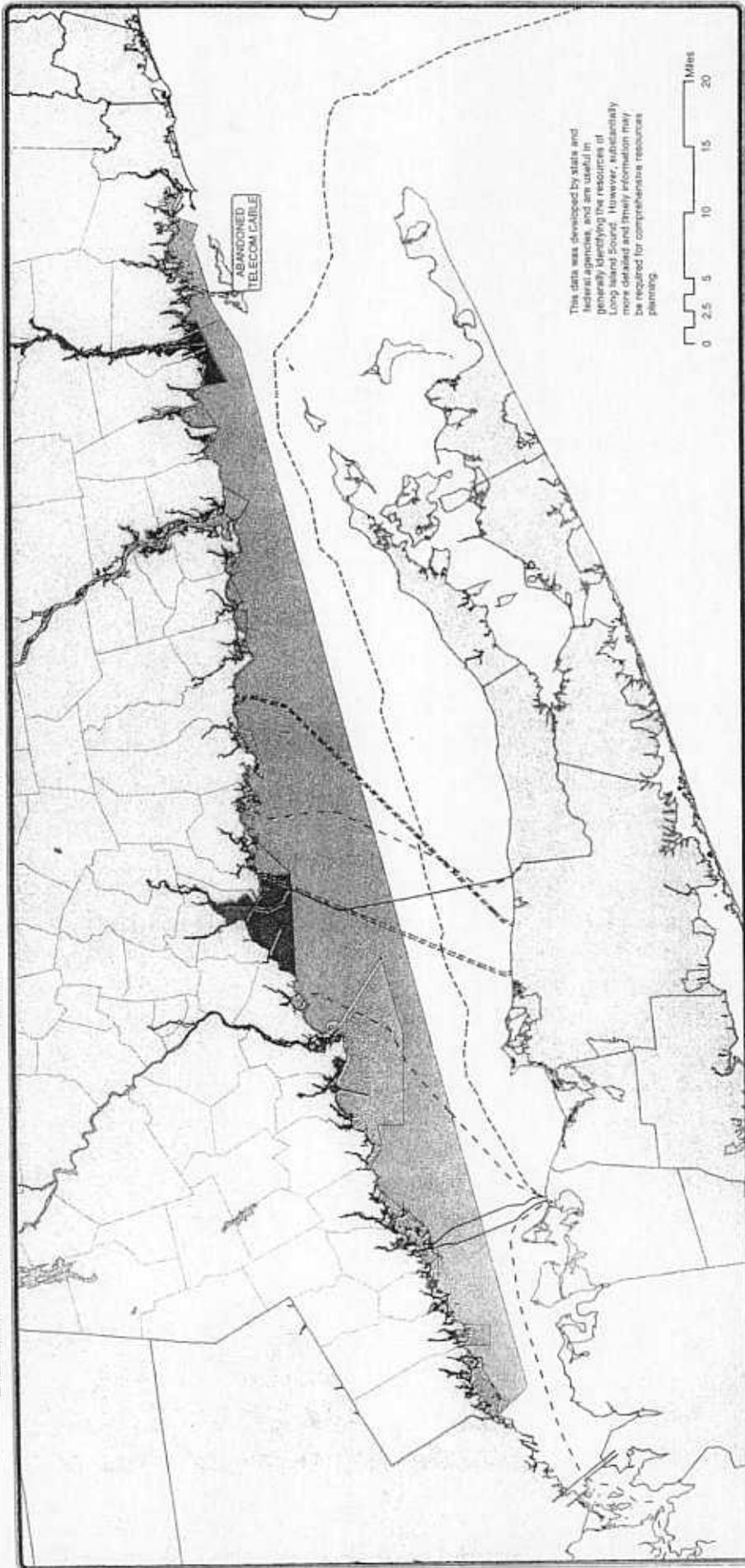
Classes SC or SD
Indicates unacceptable quality; the goal is Class SB or Class SA. Designated uses: same as for Classes C or D surface waters. Designated uses: recreational use; fish and wildlife habitat, agricultural and industrial supply and other legitimate uses including navigation. One or more uses not fully supported.

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An Inventory and Mapping of
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Date: 06-02-01
Figure: C-29

Existing & Proposed Infrastructure Crossings of Long Island Sound Marine Environment- Coastal and Marine Surface Water Quality Classification



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An Inventory and Mapping of Natural and Man-made Resources of Long Island Sound

Date: 06-02-03
Figure: C-29

Legend

Water Quality Classifications

	SA		SC/SB
	SB		SD/SA
	SB/SA		SD/SB
	SC/SA		

Coastal and Marine Surface Waters

Class SA
Designated uses: marine fish, shellfish and wildlife habitat, shell harvesting for direct human consumption, recreation and all other legitimate uses including navigation.

Class SB
Designated uses: marine fish, shellfish and wildlife habitat, shell harvesting for trade or approved areas for purification prior to human consumption, recreation, industrial and other legitimate uses including navigation.

Class SC or SD
Indicates unacceptable quality, the goal is Class SB or Class SA. Designated uses: same as for Classes C or D surface waters. Designated uses: recreational use: fish and wildlife habitat, agricultural and industrial supply and other legitimate uses including navigation. One or more uses not fully supported.

Legend

- - Gas Pipeline
- - - Electric Cable
- - - Telecommunication Cable